COLLEGES OF FURTHER EDUCATION

GUIDE TO THE MEASUREMENT OF RESOURCE EFFICIENCY

(Revised)

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In the past two years the Audit Inspectorate mounted a number of projects which involved across the board research of topics thought to be worthy of comparative study. The original version of this guide followed one such study and has now been revised to accommodate changes arising from developments in further education and the experience of those using the guide.

This study was directed by Mr J Sprigg DGA, IPFA of the District Audit Service and carried out by Mr DC Calf and Mr C McArdle of the PE Consulting Group.

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PART 1 - INTRODUCTION

1.1 This document describes a recommended approach for local government auditors when examining the efficiency of colleges of further education. It is also available for use by management in undertaking their own internal reviews. It is based on measuring several ratios for a college associated with its most recently completed academic year and comparing them with corresponding values found in a sample of colleges across the country. The approach is valid for colleges of art, agriculture and for monotechnics although the ratios have not been derived specifically for these more specialised colleges. Nevertheless, general ratios should provide an adequate guide.

1.2 The normal principles of internal control are fundamental to this Guide ie management should plan its activities on soundly based estimates of demand and should monitor actual events against these estimates.

1.3 Effectiveness concerns the achievement of policy aims and objectives and the outcomes of further education in terms of:

- successful completion of studies and/or examinations
- successful application of skills and knowledge in employment
- individual self fulfilment
- meeting local and national educational and training needs

The Guide does not attempt to measure these outcomes though the retention rates described in paragraph 3.15 may be viewed as one measure of effectiveness. However, the auditor will be concerned to ensure that relevant and adequate means exist for effectiveness to be monitored by management in colleges and local education authorities.

1.4 Efficiency is measured by the ratio of inputs to outputs. The approach assumes that college inputs are represented by:

- lecturers` contact hours with students, widely interpreted
- attendance hours of all academic staff, technicians, professional, administrative and clerical staff

and that college outputs are indicated by

- student hours (registered and taught)

1.5 Methods of teaching are outside the scope of an audit such as this. Educational effectiveness is properly the concern of HMI.

1.6 In devising the approach advice was taken from the Department of Education and Science and from the Further Education Staff College, and the views of several college principals and local authority education officers were obtained. The National Association of Teachers in Further and Higher Education (NATFHE) and the Association of College Registrars and Administrators (ACRA) and the National Advisory Body for Local Authority Higher Education (NAB) were also consulted in revising the Guide.

1.7 The approach has been developed around a set of ratios devised by the Pooling Committee. This committee was set up to consider and keep under review arrangements for pooling educational expenditure on those courses which are considered to be of national interest. This allows the costs of such courses to be spread equitably across the country. The Pooling Committee is chaired and serviced by the Department of Education and Science.

1.8 In using this Guide it is important to remember that the Pooling Committee ratios are based upon planned volumes of student learning and lecturing resource usage. Both management and the auditor need to compare actual achievement with that planned and additional ratios described in this guide enable that to be done. The Guide also deals with the outcome of further education.

1.9 The remainder of this document is structured as follows:

- Part 2 provides some background to college organisation and the Burnham agreement. It describes the situation in most colleges of further education in respect of the structures, staffing and types of course found. It explains the influence of the Burnham system.

- Part 3 describes the Pooling Committee ratios and those developed by the Audit Inspectorate for the measurement procedure.

- Part 4 describes a recommended approach to compiling the data for the ratios and the forms which are provided.

- Part 5 describes the calculations which are performed on the compiled data to derive the ratios.

- Part 6 presents an approach to interpreting the student/staff and associated ratios.

- Part 7 describes an approach to interpreting the academic/administration hours and cost balances.

- Part 8 presents some comments on the presentation of examination results to a college`s governing body.

1.10 Whilst this Guide is concerned mainly with the examination of college records with a view to the measurement of resource utilisation, the user whether he be an auditor or a manager undertaking an internal review shoud maintain a wider perspective. Colleges exist to provide a pubic service in educating or training men and women who have completed their basic education in the schools system. The purpose of further education is to meet national, local and individual needs.

1.11 If these needs are to be met adequate control of course initiation is essential as is the monitoring of courses once inaugurated. College programmes should be the result of careful assessment of demand. The outcome of courses should be the subject of review by college governors and management.

1.12 The respective responsibilities of college management and local education authorities and the relationship between them should be borne in mind. This is particularly important when reporting the results of the audit.

1.13 Though the maintenance of adequate and reliable records is subordinate to the main objectives of further and higher education, proper management control and accountability is not possible without them.

1.14 These wider questions are discussed more fully in the " Study of Further Education Colleges - Final and Interim Reports", which are useful background reading for the reviewer and are included as an annex to this publication.

1.15 The utilisation of accommodation is an important consideration for management and a significant cost element. Many colleges make serious attempts to maximise the use of space. There is as yet no proven system for the measurement of space utilisation though the DES is carrying out research into the question. The results of this research may be included in a later revision of the Guide. In the meantime, auditors should enquire about college arrangements for maximising the use of accommodation.

1.16 One ratio which is currently being advocated to measure capacity throughout the working day is Gross Floor Area in square metres divided by 10. This is still being tested.

1.17 Where the volume and timing of courses leaves significant areas of accommodation unoccupied it may be available for letting to outside bodies (eg during holiday periods). In these cases it will be appropriate to ask whether such a practice has been considered.

PART 2 - COLLEGE ORGANISATION AND THE BURNHAM AND NJC CONDITIONS OF SERVICE AGREEMENTS

College Management

2.1 Day to day management of a college is the responsibility of the Principal. He is assisted by the Vice-Principal. Occasionally there may be more than one Vice-Principal. This is rare and only applies at a few very large colleges. Very small colleges may have no Vice-Principal. The Principal and Vice-Principal do not normally teach.

2.2 The teaching work of the college is usually carried out within departments, each under a head of department. The heads normally meet regularly with the Principal to consider matters of common interest. Occasionally departments are grouped into faculties which may be headed by a Dean. Some colleges do not have departments at all. Some may have a "matrix" structure with one axis managing students grouped into courses and the other axis managing lecturers grouped into disciplines.

2.3. College government is the responsibility of its Board of Governors. This provides the college with some measure of autonomy. Represented on the Board will be the Principal, the LEA, local councillors and possibly the teaching and other staff and local commercial and industrial interests. It is through the LEA, however that funds are made available and relations with the Department of Education and Science maintained. The LEA determines the character of the colleges within its control and sets the general levels of resource provision. The Manpower Services Commission makes an important financial contribution in many colleges by commissioning courses which are thus self financing.

2.4 Each college usually has an Academic Board which oversees the academic work of the college. This includes assessing proposals for new courses. On it are the Principal, Vice-Principal, Heads of Department, the Chief/Senior Administrative Officer and representatives of the staff and students.

2.5 It is important to recognise and to distinguish between major Advanced FE institutions of which the National Advisory Board suggests there are about sixty (including the Polytechnics) and some 500 other Colleges. The broad principles of internal management information and control are equally applicable but the manner in which data relating to students and academic resources are collected often differs for example, the register systems which currently form the basis of information and control in the majority of colleges are less likely to be in evidence at the AFE institutions.

Teaching Staff

2.6 Teaching is normally carried out within the college departments. Each course is the responsibility of a particular department, in this document referred to as the host department. Most full-time courses, however, are serviced by staff from other departments.

2.7 Heads of department sometimes teach. In some local authorities there may be guidelines which advise the contribution expected of them.

2.8 The teaching staff are both full and part-time. Part-time staff commonly provide 10%-25% of teaching within a college and may provide as much as 35%.

2.9 Full-time lecturing staff are in posts which are graded in decreasing seniority as follows:

Principal Lecturer
Senior Lecturer
Lecturer Grade II
Lecturer Grade I

Occasionally full-time posts may exist where academic and administration responsibilities are mixed. Examples include tutor-librarians and combined lecturer/hostel warden positions. These cases are dealt with by abatement eg a lecturer/hostel warden who spends 75% of his time as a warden is counted as only 0.25 FTE.

2.10 It is also possible to employ Associate Lecturers of any grade. The conditions of service associated with such positions differ from those of part-time staff as will be described later (paragraph 2.27).

Non-Academic Staff

2.11 Direct support for laboratory and workshop classes is provided by the college`s technical staff.

2.12 Administrative, professional and clerical support is normally the responsibility of the staff of the Chief/Senior Administrative Officer.

2.13 Additional support services are provided by library staff and sometimes by specialist computer, education technology and student welfare staff.

2.14 Caretaking, maintenance, cleaning and canteen services also exist but are not considered by this measurement procedure. Their presence should not however be forgotten.

Modes of Student Attendance

2.15 There are several modes of student attendance at colleges of further education: full-time of various lengths and part-time of various combinations.

2.16 Students can attend college on a full-time basis for various durations. The conventional full-time student follows a course lasting three academic terms. Full-time courses may also be run to Manpower Services Commission and Industry Training Board specifications and which can last up to 48 weeks. Special instances of full-time attendance are block release and sandwich courses, where periods at college alternate with periods at a place of work, and short courses which last less than a term.

2.17 Many courses are based on part-time day, part-time day and evening, and evening only attendance. Typical of the first two are many BEC (Business Education Council) and TEC (Technician Education Council) courses. Typical of the third are adult non-vocational evening courses. Attendance is usually on one or two days each week.

2.18 Mode of attendance is important because it affects the calculations which are applied to the various types of student hours for both Burnham and Pooling Committee purposes, as will be described later.

The Burnham Agreement

2.19 The conditions of service of academic staff are governed by National Joint Council agreement whilst those relating to salaries are made within the Burnham Further Education Committee. Aspects of these are of relevance to understanding the measurement approach and are summarised in the following paragraphs.

2.20 The maximum full-time lecturer`s year is 38 weeks of which not more than 36 weeks can be teaching weeks. As a consequence of this most colleges set their academic teaching year at 36 weeks with an additional week at each end for administrative duties. It should be noted, however, that in practice the number of teaching weeks may often be less than 36 weeks.

2.21 Academic staff work a 30 hour week. Only part of this involves contact with students through timetables teaching, invigilating and supervising examinations and tests, and tutorial and supervisory work with individual students, or groups. The number of contact hours per week is dependent on the seniority of post held. These are set by local negotiation between the LEA and NATFHE (National Association of Teachers in Futher and Higher Education) within bands agreed nationally.

At present the bands (which relate to maximum contact hours) are:

Principal Lecturer	13 - 16 hours
Senior Lecturer	15 - 18 hours
Lecturer Grade II	17 - 20 hours
Lecturer Grade I	20 - 22 hours

2.22 It is possible for individual members of the teaching staff to be excused from part of their contracted contact hours through a system of remission. Each college principal may be allowed a certain number of remission hours by the local authority which he can distribute as he thinks fit. Remission hours are given for activities such as administrative work associated with TEC and BEC courses, research projects and so on. Day release may also be given to enable staff to follow courses of training, in particular in teaching for new entrants to the profession.

2.23 The proportions of the grades of lecturer posts within a college are normally within ranges which are recommended nationally. The proportions are expressed in relation to the volume and categories of work undertaken by the college.

2.24 The categories of work are as follows:

(a) Poolable

I Courses or research programmes where a first degree would nomally be a pre-requisite for attendance and which lead to a higher degree or a qualification of equivalent status. Such work is seldom found in FE colleges.

II/III Poolable courses above Ordinary National Certificate standard leading to first degrees or equivalent qualifications, and courses which involve study where an entry standard of one or more 'A' levels is normally required.

(b) Non-Poolable

II/III Non-poolable courses of study of an equivalent standard not necessarily leading to the qualifications mentioned.

IV Courses above 'O' level or comparable level leading directly to the Ordinary National Certificate or courses of comparable standard.

V Courses other than those described above.

Courses in categories I and II/III are known by the Burnham system as advanced courses. Courses in categories IV and V are known as non-advanced courses.

2.25 The range of distributions of lecturer posts is as follows:

Category	Post	Proportions
I	Principal Lecturer	20% - 30%
	Senior Lecturer and Lecturer Grade II	70% - 80%
II/III	Principal Lecturer	10% - 25%
	Senior Lecturer and Lecturer Grade II	75% - 90%
IV	Senior Lecturer	0% - 5%
	Lecturer Grade II	40% - 65%
	Lecturer Grade I	30% - 60%
V	Senior Lecturer	0% - 5%
	Lecturer Grade II	15% - 25%
	Lecturer Grade I	70% - 85%

Each LEA tends to have its own uniform policy of using the top, mid-point or bottom of the ranges for all categories of work.

2.26 No distinction is made between Senior Lecturer and Lecturer Grade II for categories I and II/III work since there is virtually automatic promotion for a Lecturer Grade II if he undertakes a significant amount of advanced work.

2.27 Part-time teaching staff are paid according to the category of work they undertake and only for actual contact time with students. Certain lecturers who are contracted to teach for a minimum of 2/3 of a full-time lecturer's class contract commitment may be appointed as Associate Lecturer. The appointment of Associate Lecturers is not confined to the basic guide. An Associate Lecturer's salary is a function of the ratio of his/her class contact hours per week to those of a full-time lecturer at the same grade.

Burnham Student Hours Calculations

2.28 Student hours calculations are an important feature of the Burnham system. It is by accumulating the student hours provided by a department that its grade is determined. It is by accumulating the student hours of all departments that the college group is determined. The grade of a department determines the salary of its head. The group of a college determines the salary of its principal and vice-principal.

2.29 Most colleges (but not all) operate register systems, one purpose of which is to provide the basis of student hours calculations. At the end of each year the student hours are totalled and noted on the registers. A Burnham return, listing all courses and their associated student hours, is then made to the LEA.

2.30 The Burnham system has certain conventions for calculating student hours. These differ in some respects from those used by the Pooling Committee. Since registers are usually the prime source of information for both systems it is important to understand the Burnham system so that the student hour information on the registers can be correctly interpreted. Note however that the FEMIS I package uses lecturer time tables as the basis for completion of the Pooling Survey (see para 3.8).

2.31 Where a course is full-time and lasts longer than a term but is not a sandwich or block release course the formula for student hours is:

No of enrolments

+

No of hours per week in college during course

+

No of weeks course is programmed to last

x

95%

In the case of normal three term courses the enrolments are taken at 1 November. It is important to note two things about this formula. First, the hours per week are hours in college and it is permitted to include periods that the students are studying privately in the college and, in practice, tea or coffee breaks. Secondly, the course may not actually last its programmed number of weeks because the lecturer completes his syllabus early or because examinations intervene. Typically the "Burnham" hours are 30 per week but this 30 should not be taken as a standard.

2.32 Where a sandwich course is concerned the formula is similar to the above but the factor applied is usually 110% instead of 95%.

2.33 Where a course is full-time but lasts less than one term the full-time formula is used with a factor of 110%.

2.34 Where a block release course is concerned - these usually last about 16 weeks - the student registered hours are counted.

2.35 For all part-time and evening courses the student registered hours are counted. When a course lasts less than one term the result of this count is multiplied by 110%.

2.36 Although all LEAs follow these conventions, differences are often found between LEAs, and even between colleges within an LEA, as to whether the 95% or 110% factors are included in the student hours recorded on registers and on the Burnham return.

2.37 The Burnham calcuation affects only a small number of staff in the country in any one year. Many LEAs nevertheless attach great importance of the Burnham calculations and require the calculations to be checked by internal audit or some other independent source. External auditors should enquire whether such checks are made before undertaking any detailed checks themselves. They should also enquire as to the extent of any checks carried out on other more important aspects of the management information system.

Control over Courses

2.38 The provision of advanced courses, other than those provided specifically for local firms or trade union officials, is controlled by Regional Advisory Councils. When a college wishes to run such a course it has to obtain approval from the RAC through the LEA. The RAC will wish to see evidence that the college will be able to meet acceptable enrolment levels before approval is given. Approval is reviewed periodically and may be withdrawn if enrolments are not kept up.

2.39 There is no set pattern for approving new non-advanced courses. Some LEAs give approval centrally; others leave it to the college principal who may liaise informally with neighbouring colleges. It is possible for the RAC to be involved at the discretion of the LEAs within its area but this does not happen often. More usually the principal decides, in consultation with the college's Academic Board, whether to start running a new course. He generally has sole discretion to stop running a course. The criteria used for both starting and stopping courses include minimum enrolment number guidelines provided by most LEAs. Auditors should ascertain whether the arrangements for approval and monitoring of courses are laid down and properly complied with. The Articles of Government may deal with this matter at certain colleges.

Open Learning

2.40 Auditors may come across colleges which are involved in "open learning", sometimes called "flexi-study". Students follow written courses of instruction at home provided by, for example, the National Extension College. They have access to lecturers at local colleges of further education for assignment marking and tutorial purposes. It is possible that this approach to learning will grow and be extended to include subjects which require access to laboratories and workshops. The latter is under consideration as an "Open Tech" programme.

2.41 This method of education raises problems in connection with a Burnham system which is based around student hours at a college. If this system is to continue in its present form it will be necessary to derive some form of equivalent student hours measure to give a college credit for open learning work it is undertaking. Approaches to this are being developed through local negotiations and by work at the Further Education Staff College. These will be embodied into the Guide when they have achieved general acceptance.

2.42 Pending an agreement on a national approach it is suggested that the following be adopted:

- determine how the college treats open learning in respect of student hours and lecturer contact hours

- exclude any claimed student hours from the student hours compilation to be described later

- treat the lecturer hours as abatements - for example if a full-time lecturer is credited with 5 hours per week of class contact out of a total class contact of 20 hours per week for his open learning case load, his time should be abated by 25% ie he should count as 0.75 FTE.

2.43 At the present time open learning is a relatively rare occurrence nationally but it will grow and will need to be dealt with in some agreed fashion.

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PART 3 - POOLING COMMITTEE AND AUDIT RATIOS

Pooling Committee Ratios

3.1 The Pooling Committee has devised four ratios. These are

Student/Staff Ratio (SSR)
Average Student Hours (ASH)
Average Class Size (ACS)
Average Lecturer Hours (ALH)

Since the academic year 1972/73 it has asked a representative selection of colleges of further education to provide information so that these ratios can be calculated. All colleges may be asked to provide this information in the future. The ratios are based upon planned student taught hours and planned lecturer contact hours.

3.2 Because it is known that the ratios are significantly affected by the type of work undertaken by a college the data is collected and analysed for poolable and non-poolable work and for three different Pooling Groups. Group I relates to laboratory/workshop-based work, Group 2 to classroom-based work and the third group is that carried out by Faculties of Art and Design, which is taken to include music and drama. Appendix I indicates the type of work associated with Groups 1 and 2. The three pooling groups will be superseded by a number of discipline programmes but the principles laid down will remain the same.

3.3 The latest available ratios are given as part of Appendix 2.

3.4 The four ratios are related to each other. This relationship will be described in Part 6.

Pooling Committee Student Hours Calculations

3.5 The conventions used by Burnham for calculating students hours are not followed exactly by the Pooling Committee. Full-time student hours for Pooling are "taught" hours.

3.6 For part-time students actual (registered) hours are replaced by "taught hours". Taught hours are the hours students are timetabled to spend in front of a lecturer whether in a classroom, laboratory, workshop or tutorial. Hours spent in work experience may also be counted provided they are supervised by regular teaching staff visits. Private study periods and tea/coffee breaks are not counted.

3.7 The Pooling system assumes 100% attendance unlike Burnham which uses a combination of "notional" full-time student hours and actual part-time hours. It is easy to see from this why misunderstandings occur.

3.8 The Further Education Management Information System (FEMIS) has been developed by the Further Education Staff College to provide information to management on the deployment of academic staff in a form which is acceptable for the purposes of the DES Annual Survey (Pooling Committee return). FEMIS I collates and analyses student (planned) taught hours but not student actual (registered) hours. The input to FEMIS 1 is based upon timetabled hours recorded on academic Staff Schedules.

3.9 Where FEMIS I is used for calculating student taught hours, auditors should satisfy themselves that the source documents are properly compiled. In colleges where registers are also maintained it may be possible to cross check the two documents.

3.10 A basic test of management control is that actual activity volumes and resource usage should be compared with those planned. Therefore, though they are not required by the Pooling Committee, actual data should be available for management control purposes.

Student/Staff Ratio (SSR)

3.11 The student/staff ratio is widely used to determine the staffing appropriate to the number of pupils in schools where it is known as the pupil/teacher ratio. Applying it to colleges presents two problems. First, because students attend in a variety of ways, it is necessary to convert the enrolments and hours of tuition received into full-time equivalents. Secondly, because there is a significant amount of both part-time and full-time teaching, it is necessary to convert the part-time teachers into full-time equivalents.

3.12 This Guide adopts the Pooling Committee approach for its measurement procedure.

3.13 The student/staff ratio is defined as:

$$\frac{\text{No. of full-time equivalent students}}{\text{No. of full-time equivalent staff}}$$

3.14 Full-time equivalent students are defined as:

$$\text{No. of full-time students enrolled on three-term courses}$$

$$+$$

$$0.9 \times \text{No. of sandwich course enrolments}$$

$$+$$

$$\frac{1.1 \times \text{No. of (planned) taught student-hours provided on short courses}}{\text{Average student taught hours of a full-time student in the same discipline group}}$$

$$+$$

$$\frac{\text{No. of (planned) taught student hours provided on other courses}}{\text{Average student taught hours of a full-time student in the same discipline group}}$$

3.15 It will be evident to the reader that the use of this definition of a full-time equivalent student introduces an anomaly which needs to be recognised. This is particularly so among colleges which undertake a large proportion of MSC work where full-time courses tend to be taught on high contact hours thus increasing the average student hours (ASH) and reducing the numbers of FTE students derived from part-time courses.

3.16 Full-time equivalent staff are defined as the number of full-time staff plus the number of part-time hours supplied in a year divided by (18 x No. of weeks in teaching year) in the case of poolable work and by (21 x No. of weeks in teaching year) in the case of non-poolable work. The number of weeks in the teaching year is normally 36 (see paragraph 2.20). All full-time staff count except principals and vice principals: certain posts such as tutor librarians may be abated (see paragraph 2.9). Note that full-time posts should not be abated on account of "remission" allowed by LEAs or principals.

Average Student Hours (ASH)

3.17 Average student hours is the number of student taught hours planned to be received by full-time students attending three-term academic year courses divided by the number of full-time students enrolled and still attending their courses on November 1 and the number of weeks in the teaching year.

3.18 Average student hours is a measure of the amount of teaching a college considers necessary to give a full-time student. It is an aid in identifying possible instances of over-teaching. This is where the amount of teaching exceeds that normally considered necesssary for a course. Whilst the auditor should draw attention to apparently high ASH, it should be borne in mind that in relation to specific courses or subjects a considerable degree of professional judgement is required to determine the student hours in a week, the final word lies with the Principal.

Average Class Size (ACS)

3.19 Average class size is the total student taught hours divided by the total lecturer class contact hours.

3.20 Some confusion can arise between class size and course size. The latter is the number of enrolments. Frequently course size and class size are identical. However, there are many occasions when courses are divided into groups for individual subject options and for laboratory, workshop or tutorial purposes equally there may be occasions when the course is combined with other courses. In these cases class sizes may be less than or more than class sizes. The ACS ratio may be an indicator of success or otherwise of course control (see paragraphs 2.38, 2.39).

Average Lecturer Hours (ALH)

3.21 Average lecturer hours is the ratio of lecturer class contact hours (planned) in a term or year divided by the number of FTE lecturers and the number of weeks in the term or year.

3.22 The ratio reflects not only the degree to which lecturers are employed in teaching duties but also the effect of local union agreements about contact hours and about Burnham percentages (see paragraph 2.21 and 2.25).

Audit Ratios

3.23 The study by the Audit Inspectorate which preceded the development of this measurement approach developed some additional ratios to those of the Pooling Committee. These are

Student Attendance Ratio
Lecturer Contact Hours Ratio
Teacher Contract Ratio (TCR)
Full-time Student Retention Rate (FTRR)
Part-Time Student Retention Rate (PTRR)
Overall Student Retention Rate (OVRR)
Academic/Administration Hours Balance (AAHB)
Academic/Administration Cost Balance (AACB)

Student Attendance Ratio

3.24 The student attendance ratio is the ratio of registered student hours (ie the actual class hours which students are recorded as having attended) to their (timetable) taught hours (ie the hours referred to in paragraphs 3.5 to 3.7). This ratio fulfils the principle of comparing actual events with those planned and may be used to qualify the DES ratios (SSR, ASH and ACS).

Lecturer Contact Hours Ratio

3.25 The lecturer contact hours is the ratio of teacher contact hours actually provided to those planned. It provides management with an indication of their success in fulfilling the planned commitment of resources. The ratio may be used to qualify the DES ratios (SSR, ALH and ACS).

3.26 FEMIS I provides for both the planned and actual teacher contact hours, (but only if the data is collected and analysed at the end as well as the beginning of a term or year.

Teacher Contract Ratio (TCR)

3.27 The teacher contract ratio is the ratio of the actual contact hours supplied by full-time staff for the year under their full-time conditions of service contracts to their contracted contact hours for the year.

3.28 This ratio indicates the extent to which full-time staff are meeting their locally agreed conditions of service in relation to class contact.

Retention Rates

29 The retention rate for a course is the ratio of the mber of students who complete the course to the number of true rolments. The concept of 'true enrolments' is introduced to iminate those students who enrol but decide after a few tendances that the course is not for them. Continuing tendance is then seen principally as a response to the ttractiveness with which the course is presented.

3.30 Separate retention rates are calculated for full-time courses and part-time courses and for vocational courses and for non-vocational courses. The classification of courses into vocational and non-vocational is left to the college.

Academic/Administration Balances

3.31 The academic-administration hours balance (AAHB) is the ratio of:

$$\frac{\text{annual attended hours of academic staff}}{\text{annual attended hours of academic, technician, professional, clerical and administrative staff}}$$

3.32 The academic-administration cost balance (AACB) is the ratio:

$$\frac{\text{annual cost of academic staff}}{\text{annual cost of academic, technician, professional, clerical and administrative staff}}$$

3.33 These ratios which reflect the percentages of teaching and non-teaching staff are not rigorous and should be used with care. They provide a means of helping the auditor identify major imbalances in staffing which justify further examination but should not be used as absolute indicators.

Remission

3.34 The remission rate should be calculated. Normally this may be expected to be two or three percent of total annual contracted contact hours. The basis of remissions should be established; they may relate to specified allowances or a blanket allowance may be given by the LEA and distributed by the principal.

PART 4 - DATA COLLECTION AND FORMS

Summary of Procedure

4.1 A summary of the steps needed to complete the procedure for a college is given by the network in Appendix 3.

4.2 The principal stages are:

- assembling the necessary college records
- examining the bases, accuracy and completeness of student hours and lecturer contact hours information on registers, academic staff schedules, the Burnham return and the Pooling Committee staff-student return, if the college complete this
- assigning departments to Pooling Groups
- compiling data
- discussing the results and draft report with the college principal prior to writing the report.
- presenting the final version of the audit report

The first four of these stages are described in this part of the document.

Assembling College Records

4.3 The records which need to be assembled are listed in Appendix 4. Because colleges vary considerably in the importance they attach to record-keeping it is always worthwhile explaining to the principal what data is actually required. He may have his own system which supplements the basic records listed in Appendix 4.

Examining of Registers and Returns

4.4 Certain colleges do not maintain registers. Where a college management information system is not based upon registers, the auditor should satisfy himself that the data it provides is both adequate and accurate. Where FEMIS I is in operation auditors should satisfy themselves that the procedures for checking and verifying the data obtained from lecturers time tables (academic staff schedules) are rigorous.

4.5 In the majority of colleges, however, registers are the most common source document for the Burnham system and the Pooling Committee staff and student hours return. It is important that they are accurately and consistently maintained.

4.6 Colleges normally have three types of register:

- full-time course registers
- class registers which are used for single subject part-time day or evening courses
- composite course registers which are used for part-time day courses made up of a number of subjects, each subject having its own page.

4.7 Registers must be examined to see whether they conform with the following which are essential to facilitate calculation of Burnham points and to ensure that student hours are accurately recorded for the purposes of the present measurement approach.

- there should be ease of cross-referencing to the Burnham return and to course timetables
- the course category should be clearly indicated (see 2.24)
- the number of student hours claimed for the host and servicing departments should be recorded.
- for all courses the enrolments, attendance hours per week and course duration in weeks used to calculate the student taught hours should be indicated.
- for all courses where actual hours form the basis of the Burnham claim all class durations should be stated
- for all courses where the Burnham system requires the student hours to be multiplied by 95% or 110% it should be clear whether or not these factors have been applied.

The audit report should record any of these provisions which are not observed.

4.8 Most current registers have been designated with the purpose of the Burnham system only in hand. The advent of the Pooling Committee return and a growing interest in the development of college management information systems have led a number of colleges to modify their register system. The following additional practices may be recommended to those colleges not currently employing them.

- student (planned) taught hours and (actual) registered hours should be recorded on all full-time registers for both host and servicing departments

- lecturer contact hours should be recorded on all registers for both host and servicing departments

- preferably separate subject registers should be maintained for those full-time courses where a variety of options are open to students. Such courses are typically represented by GCE courses where students select from a number of subject options. Without this approach it is very difficult to obtain accurate actual student taught hours or actual lecturer contact hours. The problem is increased when the selected courses fall within different Pooling Groups

- in some cases the cost of introducing this approach in its entirety may be considered to be uneconomic. Each situation should be dealt with on its merits.

4.9 Colleges which are presently completing a Pooling Committee student and staff hours return and which do not operate FEMIS I or an equivalent college designed system currently or do not apply these practices cannot be completing the return accurately. Their method should be examined and commented upon in the report. Alternative approaches to compiling student hours and lecturer contact hours, dependent upon the data available, are considered in paragraphs 4.13 to 4.20 and 4.22 to 4.34 respectively.

4.10 Finally, the auditor should satisfy himself on the following points:

- where the management information is derived from registers there is an effective system which enables the college to know it has collected all its registers when compiling its Burnham and, where appropriate, Pooling returns

- register information is accurately transferred to these returns

- there is no evidence to suggest that registers are completed other than during the class. Such practices are normally indicated by a markedly typical pattern of attendance suddenly appearing on a register, particularly towards the end of the academic year. (However, in some cases, attendances recorded in temporary registers may be transferred periodically or at year end to permanent registers).
- registers are securely stored between classes. It might be worthwhile checking a sample of the current year's registers taking as the starting point a random sample of courses. The registers should have been completed up to the last meeting of each class. A common practice to be particularly discouraged is the storing of registers in corridors which are easily accessible to students; the loss of a set of registers would threaten the accuracy of the management information system including the Burnham calculation and the Pooling Survey return.

Pooling Group Assignment

4.11 There will usually be little difficulty in assigning college departments to Pooling Groups if Appendix I is referred to. Normally the great majority of department's teaching is linked to subjects in only one group. The most common instance where this may not be the case is a general studies department which teaches a significant amount of work in both groups 1 and 2, eg GCE arts and science subjects. In this case it will be necessary to split the department into two parts for the purpose of the analysis. A consequence of this is that wherever the department provides servicing for other departments it will be necessary to determine which part is providing the service. Note that it is envisaged that in the near future colleges will be required to submit their Pooling Returns under a number of discipline programmes and not three discipline groups. The discipline programmes are internationally accepted.

Student/Staff Data Sheet

4.12 The Student/Staff Data Sheet is illustrated as Appendix 5. Its purpose is to summarise the data necessary to calculate the various student and staff ratios, and to record the results of those calculations, for a department, a Pooling Group within a department which encompasses two groups, and for those departments in total which make up the Pooling Groups for the college as a whole.

Compilation of Student Hours and Enrolments

4.13 Compilation of student taught hours, student registered hours and enrolments must not begin until there is a thorough understanding of the college's register system and of the bases and accuracy by which student hours are presented on the registers and on summary documents, such as the Burnham calculations or the working papers associated with a Pooling Committee student and staff hours return. This should have been obtained during the register examination stage. (See also paragraph 4.40)

4.14 If the college is a contributor to the return, as eventually all colleges may be, and the register examination stage has shown that the return has been correctly completed then data can be transferred directly to each department's, or Pooling Group within department's, Student/Staff Data Sheet from the working papers used to compile the return. As from the 1980/81 academic year the return will separate Group I and II/III work into that which is poolable and that which is not. For the purposes of this exercise (and the Pooling Committee return) poolable work and advanced work should be taken as synonymous as should non-poolable and non-advanced work.

4.15 If the college is not a contributor to the return, or the return has been incorrectly completed, student hours will have to be completed with the assistance of the Burnham return. This process will be described in the following paragraphs.

4.16 Check each full-time register against the Burnham calculation to ensure that all are present and proceed as follows:

- If the register does not show weekly student (planned) taught hours in addition to the weekly student hours in college required for Burnham obtain this information from the head of the host department. In general, the hours claimed for servicing departments will be taught hours only, but this should be checked with the head of the host department. Obtaining taught hours will present no difficulty where a course offers no subject options or where subject options are offered and individual subject registers are used. If there are options, but a single course register is used, the head of the host department should be asked to give his best estimate for the average weekly student taught hours of a student on the register.

- Re-calculate the student taught hours for the host and servicing departments.

- Enter the result of each calculation on a Student Enrolments/Hours Sheet (Appendix 6). A separate sheet should be used for each category of work within each Pooling Group within each department. Where the host or servicing departments have been divided into two parts for Pooling Group purposes (see paragraph 4.11) ensure that sufficient information is collected to place the hours in the correct part. Where such a department offers a course which includes subjects from both its Pooling Group parts and a single course register is used, the head of department should be asked to apportion the student taught hours between each part in accordance with his estimate of the contribution of each.

4.17 Enter the student registered hours on the Student Enrolments/Hours Sheet.

4.18 In the case of full-time three-term courses and sandwich courses only, it is necessary to enter enrolment information as well. This data is compiled on the Student Enrolments/ Hours Sheets and entered in the appropriate full-time equivalent (FTE) students fields of the Student/Staff Data Sheet.

- For registers which refer to complete courses take the enrolment numbers used in compiling the student taught hours information and apportion them to the host and servicing departments in accordance with the student taught hours provided by each.

- Where a course is constructed from subject combinations (eg GCE courses) and separate registers are used, obtain the enrolments for the course from the host head of department's enrolment records and apportion the numbers to each subject register in accordance with the student taught hours provided.

4.19 Deal with part-time courses as follows:

- If the register does not show student (planned) taught hours in addition to the actual (registered) hours required for Burnham, obtain this information from the head of the host department.

- Check each part-time register against the Burnham return and note on the return whether the course is part-time day, part time day and evening or evening only.

- If the Burnham return records show short part-time courses after multiplying their actual hours by 110%, modify the hours on the return to the actual hours.

- Total the hours by mode of attendance, course category, department or Pooling Group within a department and transfer the totals for both (planned) taught hours and (actual) registered hours to the appropriate columns of the student Enrolments/Hours Sheets.

4.20 The final steps in compiling student taught hours and enrolments are to summarise the total full-time and part-time hours by mode of attendance from the Student Enrolments/Hours Sheets to departmental, or Pooling Group within department, Student/Staff Data Sheets, and to summarise these in turn to Student/Staff Data Sheets by Pooling Group for the college as a whole.

COMPILING LECTURER NUMBERS AND CONTACT HOURS

4.21 Full-time lecturing staff numbers can be obtained from the college staff list for the relevant academic year. This should be annotated to show for each department.

- staff who were recruited during the year and when
- staff who left during the year and when
- staff who were promoted during the year and when
- grades of staff
- any staff whose contracted hours were abated from the grade norm by other duties
- remissions and day-release affecting contact hours

Staff paid for the whole academic year should be counted as 1. Staff present for a proportion of the academic year should be counted on a pro rata basis. Promoted staff should be allocated to their earlier and later grades in proportion to the time spent in each. Where an employee has a role which requires him to teach and to undertake administration duties not normally expected of a lecturer (eg a tutor/librarian or a lecturer/hostel warden) he should be counted against the teaching and administration staff totals in proportion to the time he is expected to allocate to each type of duty. The manner of dealing with administrative staff is considered in paragraph 4.35.

4.22 The standard weekly contact hours for each grade of lecturer should be obtained from the college principal. In some LEAs there is a recommended number of contact hours for heads of department. Record this, where it exists, on the Student/Staff Data Sheet. It may be dependent upon the grade of the department.

4.23 Whereas the Burnham system requires a college to keep records of actual student hours it is up to the local authority or the college principal to decide whether records of actual lecturer hours should be kept. Some colleges may claim to keep such records but a closer examination is likely to show that the information they actually present is an accumulation of the hours on lecturers' timetables. Since the timetables are normally prepared prior to the start of the academic year it may well be they are accurate sources of information as to what was planned but not on what actually happened. Some staff leave but are not replaced immediately, others contract illness and have to be temporarily replaced, some courses fail to start due to lack of enrolments, some courses take place which are not programmed and so on.

4.24 Record the planned class contact hours on the Student/Staff Data Sheet.

4.25 Accurate compilation of actual lecturer hours has to be based on register evidence that a course or class took place, of its duration, and information on the contact hours provided each day or week of the course or class.

4.26 If a college has alredy collected this information and it can be demonstrated to be accurate it can be summarised and transferred directly to each department's or Pooling Group within department's Student/Staff Data Sheet.

4.27 If the college has not collected this information it may be possible to create it. The determining factor is whether the college uses subject registers for those courses which provide a variety of options for students eg GCE classes. If each subject has its own register, lecturer hours can be calculated. If a single course register is used it is impossible. In the latter case recourse will have to be made to accumulating the hours from lecturer's timetables.

4.28 Dependence upon actual hours or lecturer timetables affects the calculation process. The ratios require the staff hours to be given as:

- total hours
- hours worked by full-time staff on full-time contract
- hours worked by full-time staff on part-time contract
- hours worked by part-time staff on part-time contract
- substitution hours

The Student/Staff Data Sheet has been designed to reflect the preferred approach, which is based on both planned and actual contact hours being available. This is to accumulate the total planned contact hours from timetables or from registers and the total actual contact hours from the registers and to subtract the total actual part-time hours paid to full-time and part-time staff in order to obtain the hours worked by full-time staff under their full-time conditions of service. If the staff timetable approach has to be used the latter hours are obtained directly, as are the various types of part-time hours. Total hours are then obtained from their sum. The suggested approaches to compiling the hours for the two situations are as follows.

4.29 If the college has no full-time courses which offer a variety of subject options, or if it has but there is a class register for each option, then proceed as follows:

- for full-time registers obtain from the host head of department the weekly lecturer contact hours to be associated with the student taught hours for the host and servicing departments. Obtain the total contact hours for the course by multiplying this value by the number of weeks used in the calculation of student taught hours. Write this on the register for each host and servicing department or Pooling Group within a department.

- for other types of registers the class duration and lecturers should be present on the front cover of the registers. Look for any evidence that the course has split into two parts with simultaneous classes or that more than one lecturer may have been present for a class. Take your conclusions for all class registers to the head of the host department for confirmation. Then calculate the contact hours according to the number of classes held and enter on the registers for each host and servicing department or Pooling Group within a department.

- divide each department's registers acording to their course category and summarise the contact hours on the Lecturer Hours Sheet (Appendix 7) for each department or Pooling Group within a department.

- when all departments have been completed total the data on each Lecturer Hours Sheet and transfer it to the appropriate departmental, or Pooling Group within a department Student/Staff Data Sheet.

- obtain a summary of the part-time claims by full-time staff and part-time staff for teaching and substitution and enter the data on the appropriate Student/Staff Data Sheet.

- subtract the part-time hours from the total hours to obtain the contact hours of full-time staff on their full-time contracts.

- summarise the individual Student/Staff Data Sheets onto Sheets for the college as a whole for each Pooling Group.

4.30 If the college has full-time courses which offer a variety of subject options but single course registers are maintained proceed as follows:

- obtain the full-time lecturers' timetables and divide them into departments. Where a department has been split into two parts according to Pooling Group so separate the timetables, since lecturers will tend to be associated with subject specialisms.

- ensure that timetables are present for each member of staff according to the staff list. Calculate the timetabled contact hours for full-time staff under their full-time contracts for the academic year taking due account of resignations and starters during the year. Enter the results on the departmental or Pooling Group within department, Student/Staff Data Sheets.

- add the part-time hours claimed to the full-time contract hours to obtain the total hours.

- summarise the individual Student/Staff Data Sheets onto Sheets for the college as a whole for each Pooling Group.

4.31 Information relating to the duration of the academic teaching year (normally 36 weeks), remission hours given to each department and day release hours given to each department are obtainable from the principal or heads of departments.

4.32 Some colleges maintain lecturers' timesheets which show actual contact hours. These may be listed and summarised and may be used by the auditor in compiling actual contact hours.

4.33 The FEMIS input document takes the form of lecturers' timetables which over the successive terms measures both planned and actual contact hours. (But only if the data is collected and analysed at the end as well as the beginning of a term/year).

4.34 Part-time academic staff attendance hours are obtained by totalling the paid part-time attendance hours from the Student/Staff Data Sheet.

4.35 Attendance data for non-academic staff is to cover technicians, stores, professional and clerical staff only. Do not include maintenance, caretaking, cleaning and canteen staff. It should be built up from a staff list, normally in the possession of the Chief/Senior Administrative Officer, annotated as described in Appendix 4. In contrast to academic staff most non-academic staff are employed for a 46-47 week year but it is common to find some employed only during term time. Absence is to be taken into account only when payment is not made.

4.36 Annual cost data is to include salaries, national insurance and superannuation. The data may be available within the college - it is recorded on Table 3 of a Pooling Committee staff student hours return - or it may be necessary to obtain it from the LEA or the Finance/Treasurer's Department.

Compiling Student Retention Data

4.37 Student retention rates are based on a sample of registers for each department.

4.38 Each department's registers should be divided into three groups, one each for

- full-time vocational courses
- part-time vocational courses
- part-time non-vocational courses

A random sample of 10% of the registers should be chosen from each group subject to a minimum number of 12 registers per department.

4.39 Students who are not in attendance after the fourth week following enrolment on the commencement of the course should be excluded from the count for this ratio. Students who join after the end of the four week period should be included. All of these are then termed "true enrolments."

4.40 The retained students with whom "true enrolments" are compared are those still in attendance during the last six weeks of the course. Attendance during this period may well be sporadic where students are revising for examinations. Some judgement may need to be exercised in determining whether a student is in attendance or not.

PART 5 - CALCULATION

5.1 Part 4 described the compilation of the data from which the ratios are derived and the forms on which it is entered. This part describes the calculations which have to be performed on the data.

5.2 Understanding of the description can be checked by referring to the following completed forms

Student/Staff Data Sheet	-	Appendix 11
Student Retention Summary Sheet	-	Appendix 12
Academic/Administration Balances	-	Appendix 13

FTE Students

5.3 FTE student numbers are required for the Student/Staff Data Sheet. They are calculated separately for poolable and non-poolable work

- For full-time three-term courses the FTE students are the enrolments recorded on the relevant Student Enrolments/Hours Sheets. For poolable courses add the enrolments for Categories I and II/III (poolable) work. For non-poolable courses add the enrolments for Categories II/III (non poolable), IV and V work.

- Sandwich courses are treated in a similar manner to three term courses except that the results of the calculation are multiplied by 0.9.

- For other types of course the FTE students are derived by totalling the hours of the two categories of work associated with each and dividing by the average student hours (see paragraph 5.9) for poolable or non-poolable courses, as appropriate, and the number of weeks in the academic teaching year. In the case of courses lasting less than a term the calculation result should be multiplied by 1.1

FTE Staff

5.4 FTE staff numbers are required for the Student/Staff Data Sheet. They are derived and presented in two parts. The first part is based on part-time hours claims and the second part on full-time numbers. As for FTE student numbers each part is calculated separately for poolable and non-poolable work.

5.5 Part-time hours claimed are converted to FTE staff by:

- taking the total part-time hours claimed for poolable work and dividing it by 18 and by the number of weeks in the academic teaching year.

- taking the total part-time hours claimed for non-poolable work and dividing it by 21 and by the number of weeks in the academic teaching year.

5.6 Full-time staff are allocated to poolable and non-poolable work in proportion to the contact hours supplied by full-time staff under their full-time contracts.

5.7 The numbers of FTE staff in total associated with poolable or non-poolable work are the totals of these two calculations.

Student Staff Ratio (SSR)

5.8 The student-staff ratio is the number of FTE students divided by the number of FTE staff and it is calculated separately for poolable and non-poolable work and is recorded on the Student/Staff Data Sheet. It should be calculated for department and for the college as a whole. FEMIS also enables it to be calculated for each course and each lecturer.

Average Student Taught Hours (ASH)

5.9 Average student taught hours is the student hours provided for full-time courses divided by the associated number of FTE students and the number of weeks in the academic year. It is calculated separately for poolable and non-poolable work and is recorded on the Student/Staff Data Sheet. ASH is used as a basis for converting part-time students to FTE (See also paragraph 3.14 - 3.15).

5.10 In some departments it will be found that there are no poolable or, less frequently, no non-poolable courses on which to base the calculation. In this case, use the national median value for ASH in Appendix 2 (so as not unduly to bias other calculations of ASH when computing college-wide ratios).

Average Class Size (ACS)

5.11 Average class size is the total student taught hours divided by the total contact hours supplied by full-time and part-time staff. It is calculated separately for poolable and non-poolable work and is recorded on the Student/Staff Data Sheet.

Average Lecturer Hours (ALH)

5.12 Average lecturer hours is the total contact hours supplied by full-time and part-time staff divided by the FTE staff providing them and the number of weeks in the academic teaching year. It is calculated separately for poolable and non-poolable work and is recorded on the Student/Staff Data Sheet.

Student Attendance Ratio

5.13 The Student Attendance Ratio shows the extent to which planned provision for student taught hours is matched by actual attendance in class. It is used to qualify the DES ratios SSR, ASH, and ACS which are all based upon planned data. The ratio is calculated separately for poolable and non-poolable work by dividing the total (actual) registered student hours by (planned) taught hours.

Lecturer Contact Hours Ratio

5.14 The Lecturer Contact Hours Ratio shows the degree of success in matching the actual delivery of class contact hours with those planned. It is used to qualify the DES ratios SSR, ALH and ACS which are all based upon planned data. The ratio is calculated separately for poolable and non-poolable work by dividing the total actual lecturer contact hours by those planned.

Teacher Contract Ratio (TCR)

5.15 The teacher contract ratio is the contact hours supplied by full-time staff on their full-time contracts divided by the contact hours they are contracted to supply by these contracts. The latter is calculated by totalling the results of multiplying the number of staff in each grade of post by the weekly contact hours associated with it and by the number of weeks in the academic teaching year. The ratio is recorded on the Student/Staff Data Sheet.

Student Rentention Rates

5.16 Retention rate is the ratio of retained students to tru
enrolments. Full-time retention rates (FTRR), part-time retenti
rates (PTRR) and overall retention rates (OVRR) are calcul
for vocational courses, non-vocational courses and all cou
These ratios are recorded on the Student Retention Summary

Academic/Administration Hours Balance (AAHB)

5.17 The academic/administration hours balance is the ratio of the attendance hours including overtime, of full-time and part-time academic staff per annum divided by the total attendance hours, including overtime, of full-time and part-time academic and non-academic staff. This ratio is recorded on the Academic/Administration Balance sheet.

Academic/Administration Costs Balance (AACB)

5.18 The academic/administration cost balance is the ratio of full-time and part-time academic staff per annum divided by the total costs of full-time and part-time academic and non-academic staff. This ratio is recorded on the Academic/Administration Balances Sheet.

Remissions

5.19 The percentage of remission allowed should be recorded on the Student/Staff Data Sheet. The number of hours of remission should be obtained from the Principal or from college records. The remission hours should be shown as a percentage of total contracted contact hours.

PART 6 - INTERPRETING STUDENT/STAFF AND ASSOCIATED RATIOS

Introduction

6.1 None of the ratios calculated are absolute indices of a college's performance. By comparing them with national patterns it is possible to identify where a college departs from these patterns. A variety of causes for this may exist . These may be known to the LEA and the Principal or they may require further investigation. They may be acceptable to them, because of particular policies and circumstances, or they may not. It is important, therefore, to see the ratios as the starting point for discussions and not ends in themselves.

6.1a In interpreting the ratios care should be taken to consider the total situation and to listen carefully to the educational viewpoint. For example a low ALH may be indicative of poor staff utilisation but it could also be accompanied by a good SSR together with satisfactory retention and pass rates. This may be so because more lecturers' time is spent in curriculum design and improving techniques and less on face to face class contact. A large element of judgement is needed to balance the ratios to the optimum educational and economic advantage.

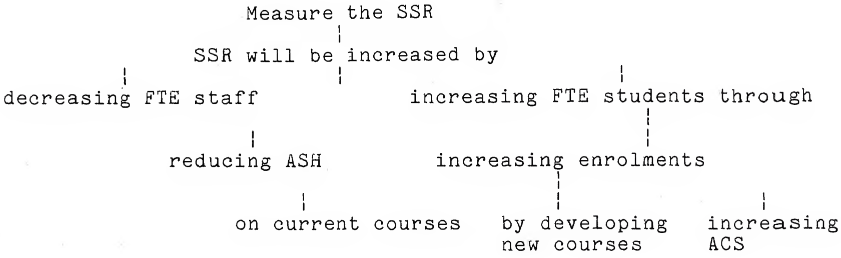
Student-Staff Ratio

6.2 The student-staff ratio (SSR) is a unifying index of the general state of a college's operation in terms of non-financial resources and outputs. Its value lies in helping the LEA and the Principal to decide how much a College must change if they wish to occupy a predetermined position in the national patterns.

6.3 The fact that a college has a relatively high SSR is not necessarily a reason for not seeking a further increase. The Audit Inspectorate understands from HM Inspectorate of Schools that no relationship has yet been established between educational effiectiveness and SSRs at English and Welsh Colleges of Further Education. Therefore, it is possible that even high ratios can be further increased without detriment to educational effectiveness.

6.4 The following pages describe how to approach the pursuit of a higher SSR, if this is what is required. The diagram below summarises the influencing factors:

IDENTIFYING THE FACTORS INFLUENCING SSR



6.5 Compare the SSR for the college with:

- the national pattern (Appendix 2)
- college values at previous audits
- other colleges within the LEA

Consider the implication for the ratio of the Student Attendance and Lecturer Contact Hours ratios.

Scope for decreasing FTE staff

6.6 Assess the general productivity of the college teaching staff by comparing the ALH with the national patterns (Appendix 2). Make comparisons with the college ratios at previous audits and with those of other colleges within the LEA. Evaluate the effect of the Lecturer Contact Hours Ratio.

6.7 Determine the extent to which the ratio is affected by the local application of the Burnham percentage ranges (see paragraph 2.25) by the contact hours per grade (see paragraph 2.21) and by remission and day release. Also seek any adverse contribution arising from long-term staff absence or secondment with pay.

6.8 Examine the extent to which full-time staff are fulfilling their contracted contact hours as measured by the TCR. A low ICR may indicate scope for running additional courses or for replacing part-time staff with full-time staff on current courses or using the higher proportion of part-time staff in a strategic manner.

6.9 Check whether full-time staff are receiving extra payment for work which could be undertaken wholly or partly within their full-time conditions of service. A suggested approach is to identify from payroll records the ten full-time lecturers who are receiving the highest extra payments at the end of each academic term. Their timetables and class registers should be examined to determine the contact hours they should have provided, and did provide, as part of their full-time conditions of service. Discrepancies should be dicussed with the head of department since aspects of the NJC Conditions of Service other than contact hours may be relevant. An examination of the timetables of other staff may show that they also might have been able to do the work within their contracted hours.

Scope for reducing ASH

6.10 Assess the scope for reducing ASH by comparing the college values with the national patterns (Appendix 2). Make comparisions with the ratios at previous audits and with those of other colleges within the LEA.

6.11 Over-teaching is a problem recognised by many principals. During the college visits which preceded the establishment of this methodology it was frequently stated that 5-7 hours per subject per week is the maximum formal teaching requirement at 'A' level. Longer hours on other courses are sometimes dictated by their examining bodies. The only way to correct an adverse ASH ratio is to reduce the lecturer contact hours per course to as few as practicable. Caution should be exercised in considering this ratio which involves a degree of professional (educational) judgement.

Scope for increasing enrolments on current courses

6.12 The ACS is predominantly an indicator of course and curriculum management. It obviously has an important bearing upon the management of resources. Whilst not being identical to average course size, the average class size (ACS) should provide some indication of how college enrolments per course compare with the national pattern (Appendix 2). Comparisons should also be made with the ratios at previous audits and with those of other colleges within the LEA. The ACS may possibly be an indicator of space utilisation. The relationship is not strong enough to enable anything more to be said than that if the ACS is low the question of space utilisation should be reviewed.

6.13 Some LEAs set minima for enrolments before courses can proceed. Check whether this is so and investigate courses which appear from the registers to have taken place without reaching these standards. This must be done with the heads of departments since some courses with low enrolments may take place through sharing classes with other courses. Enquire into the arrangements for monitoring group sizes by the governors and by the LEA.

6.14 In the absence of LEA minima the auditor can refer to the Pilkington report which recommended the following initial enrolments before a course should proceed:

Full-time (including sandwich) courses	24
Part-time day courses involving a large element of workshop practice	15
Other part-time day courses	20

Where a course continues into a second and subsequent years, enrolments for these years would be expected to be less than these values due to examination failures etc.

6.15 In the case of advanced courses which have been approved through the Regional Advisory Council check that enrolments are continuing to be in accordance with the minima laid down by the Council.

6.16 Self-Funding courses are not subject to minimum enrolments.

6.17 Assess the marketing and demand sensing effectiveness of each department by determining

- whether a nominated lecturer is responsible for marketing each major course

- what percentage of each nominated lecturer's time is allocated for marketing

- whether records exist to show trends in enrolments

- how many new courses have come into existence during the previous three years and how many old courses have ceased to exist during this period.

- whether the college has a systematic approch to visiting local employers and to identifying new employers

- whether the college has a systematic approach to identifying skill shortage eg contact with Job Centres or local Intelligence Units of the Manpower Services Commission.

Scope for increasing enrolments through developing new courses

6.18 Investigate for each department what plans currently exist for developing new courses and the stage they are at. Other aspects of this subject have been dealt with in the previous section.

The lecturer contact hour ratio, the student attendance ratio and the student retention rate

6.19 The SSR and other pooling ratios are based upon planned data. There is, thus, some risk in their use without some knowledge of actual activity volumes and resource usage. Therefore three additional ratios are computed. These are:

a. the lecturer contact hour ratio is an indicator of management skill in planning and monitoring the utilisation of academic resources.

b. the student attendance ratio reflects the accuracy of management forecasts of college activity and the extent to which lecturers are meeting the needs and retaining the interest of student.

c. the student retention rate is a more specific indicator of the extent to which lecturers are meeting the needs and retaining the interest of students. It is thus one measure of effectiveness.

6.20 Colleges must be encouraged to raise all retention rates since these provide a measure of each college's ability to recruit students who have the ability and motivation to complete a course and to employ teaching staff who present courses in a manner which retains students' interest. However, enquiries may show good reason for a low retention rate, for example many 16-19 year olds attend courses because they are unemployed. If they find work the course is abandoned.

6.21 The ratios should be compared with those in Appendix 2, with previous ratios for the college and with the ratios for other colleges within the LEA. Retention rates are normally at their highest when:

- entrance to the course involved a selection procedure

- the student is sponsored by his employing organisation, the Manpower Services Commission or a similar organisation

- the course is vocational with an examination

6.22 Examine the procedures which each department operates to identify falling retention rates. the best practice which has been encountered is the periodic listing of all classes where attendance drops below pre-set values followed by an investigation of the lecturer's course programme and teaching techniques.

PART 7 - INTERPRETING THE ACADEMIC/ADMINISTRATION BALANCES

7.1 The two academic/administration balances provide measures of the academic staff input to the college as a proportion of the total staff input. The balances should be compared with the national patterns (Appendix 2), college values for previous years and values for other colleges within the LEA.

7.2 An advantage which the hours balance has over the cost balance is in relation to trends. Different percentage pay awards to academic and non-academic staff at the annual negotiation, can distort trends in the cost balance.

7.3 The balance should be considered from two view points. The first is in relation to the academic staffing as it currently is. The second is in relation to any comments made about academic staffing levels after analysing the student-staff ratio, the average lecturers hours ratio and the teacher contract ratios.

7.4 Differences between colleges within an authority may relate to different ways in which administration tasks are allocated between administrative and teaching staff by the Principal as well as to relative standards of efficiency. Likewise, there may be differences between colleges in different authorities because the authorities allocate administrative duties differently between their central education authority administration staff and their colleges' administration staff. In some cases, the closure of a department or another college (eg a Teacher Training College) may result in surplus academic staff who are then employed in administrative posts. It is important that full enquiries are made before drawing conclusions from these ratios.

PART 8 - SUCCESS RATES

8.1 It is impractical for the auditor to examine a college's success rates. Yet these are one of the most important college outputs and were recognised as such by the college principals who were involved in the study which preceded the development of this measurement process.

8.2 It is difficult to see how a college's Board of Governors and Academic Board can fulfil its role without being presented annually with statistics which show:

- how successful completion of courses compares with enrolments
- number of entrants per examination
- number of passes per examination
- some indication of how course completion and pass rates compare with previous years for the college
- some indication of how the college success rates compare with national averages

The precise form of these statistics may have to vary according to the type of course. National averages for pass rates are produced by a number of examining bodies but usually not until well after individual results are published. Consequently national pass rates may have to be shown for the previous year as a guide.

8.3 It is suggested that the auditor looks at the examination results reports given to the Board of Governors and Academic board, usually in November, and comments on the degree to which they conform with the data in paragraph 8.2.

8.4 Like the MSC, some colleges make enquiries some time after the completion of a course to ascertain the extent to which the course has enabled the student to find suitable employment. This is a most useful monitoring procedure.

8.5 FEMIS II is expected to provide outcome ratios which include both student retention rates and success rates.

PART 9 - REPORTING THE RESULTS

9.1 Many of the issues covered in this Guide are regarded as contentious. Some involve academic judgement. It is therefore most desirable that the findings of the audit are dicussed fully with the college Principal before being taken further. In practice criticisms which are accepted verbally are often strongly disputed when they appear in print. Preferably therefore the Principal should receive a copy of the report in draft before the discussion takes place.

9.2 Any representations made by the Principal should be carefully considered before the report is finalised. Where matters of professional educational judgement are involved eg the level of average student hours (ASH) it may be best to report the facts and avoid other written observations such as references to over-teaching.

9.3 It is also important to recognise that the college Principal and the Chief Education Officer have different responsibilities and may not, therefore, take a similar view of matters raised in the report.

APPENDIX 1

THE POOLING GROUPS

GROUP 1 (laboratory/workshop-based subjects)

Examples are:

- engineering
- mining
- metallurgy
- building
- surveying
- architecture
- textile technology
- printing
- book production
- biology
- botany
- town and country planning
- zoology
- physics
- chemistry
- geology
- pharmacy
- nautical studies
- mathematics

GROUP 2 (classroom based subjects)

Examples are:

- management studies
- economics
- geography
- accountancy
- administration
- catering
- institutional management
- law
- sociology
- liberal studies
- education
- languages
- home economics
- transport
- literature
- history
- archaeology
- philosophy
- librarianship
- liberal and general studies

Faculties of Art and Design

This includes music and drama. It is only used where colleges have departments devoted to these subjects. If taught only in non-vocational courses then subjects should be assigned to Group 2.

APPENDIX 1 (Contd.)

DISCIPLINE GROUPS

A: Initial teacher training

B: In-service teacher training and other education

C: Medicine, dentistry, pharmacy and ancillary health subjects

D: Engineering

E: Other technology and manufacture

F: Agriculture, forestry and veterinary studies

G: Science, applied science

H: Mathematics and computer studies

I: Business management, accountancy and law

J: Social and administrative studies

K: Other professional and vocational studies

L: Languages and literature

M: Humanities

N: Music, drama and visual arts

SUBJECTS SEPARATELY IDENTIFIED WITHIN PROGRAMMES
WITHIN PROGRAMME

C: Pharmacy and pharmacology
Environmental health

E: Textile technology and manufacture

I: Nautical studies

L: Art and design

K: Town and country planning

APPENDIX 2(a)

NATIONAL PATTERNS FOR RATIOS 1981/2

Polytechnics

		Lower Quartile	Median	Upper Quartile
SSR				
Group 1	Poolable	8.6	8.9	9.7
	Non-Poolable	7.3	8.6	11.0
Group 2	Poolable	10.1	10.6	11.4
	Non-Poolable	7.4	10.0	12.1
Art/Design	Poolable	6.5	7.3	8.1
	Non-Poolable	7.3	8.5	10.9
ASH				
Group 1	Poolable	19.5	20.5	23.4
	Non-Poolable	25.9	26.2	26.2
Group 2	Poolable	14.4	15.4	16.6
	Non-Poolable	22.6	22.9	24.6
Art/Design	Poolable	23.9	26.4	29.9
	Non-Poolable	26.5	30.0	33.1
ALH				
Group 1	Poolable	12.8	13.1	14.4
	Non-Poolable	13.5	14.6	15.1
Group 2	Poolable	11.8	12.6	13.5
	Non-Poolable	12.1	13.9	15.5
Art/Design	Poolable	14.8	15.6	17.6
	Non-Poolable	16.1	18.3	19.6
ACS				
Group 1	Poolable	12.3	14.2	16.3
	Non-Poolable	12.7	14.8	19.5
Group 2	Poolable	12.3	13.4	15.0
	Non-Poolable	12.4	15.4	23.9
Art/Design	Poolable	11.0	11.7	15.3
	Non-Poolable	11.2	13.3	20.3

APPENDIX 2(b)

NATIONAL PATTERNS FOR RATIOS 1981/2

Colleges of Further Education

		Lower Quartile	Median	Upper Quartile
SSR				
Group 1	Poolable	6.5	7.5	8.7
	Non-Poolable	8.0	8.5	9.4
Group 2	Poolable	6.8	8.5	10.3
	Non-Poolable	8.2	9.8	11.1
Art/Design	Poolable	5.6	6.6	8.7
	Non-Poolable	7.1	7.7	9.3
ASH				
Group 1	Poolable	25.6	26.8	26.8
	Non-Poolable	27.3	28.6	30.3
Group 2	Poolable	21.7	23.1	26.4
	Non-Poolable	25.5	28.0	30.0
Art/Design	Poolable	20.1	25.4	31.3
	Non-Poolable	27.1	29.6	30.6
ALH				
Group 1	Poolable	14.4	15.9	16.8
	Non-Poolable	17.6	18.2	18.7
Group 2	Poolable	14.3	15.6	17.0
	Non-Poolable	17.1	18.3	19.1
Art/Design	Poolable	15.2	16.0	16.9
	Non-Poolable	17.7	18.7	19.5
ACS				
Group 1	Poolable	10.7	12.4	14.6
	Non-Poolable	12.2	13.0	14.7
Group 2	Poolable	10.1	12.0	14.4
	Non-Poolable	13.4	14.8	16.4
Art/Design	Poolable	8.5	10.8	12.2
	Non-Poolable	10.9	13.1	15.8

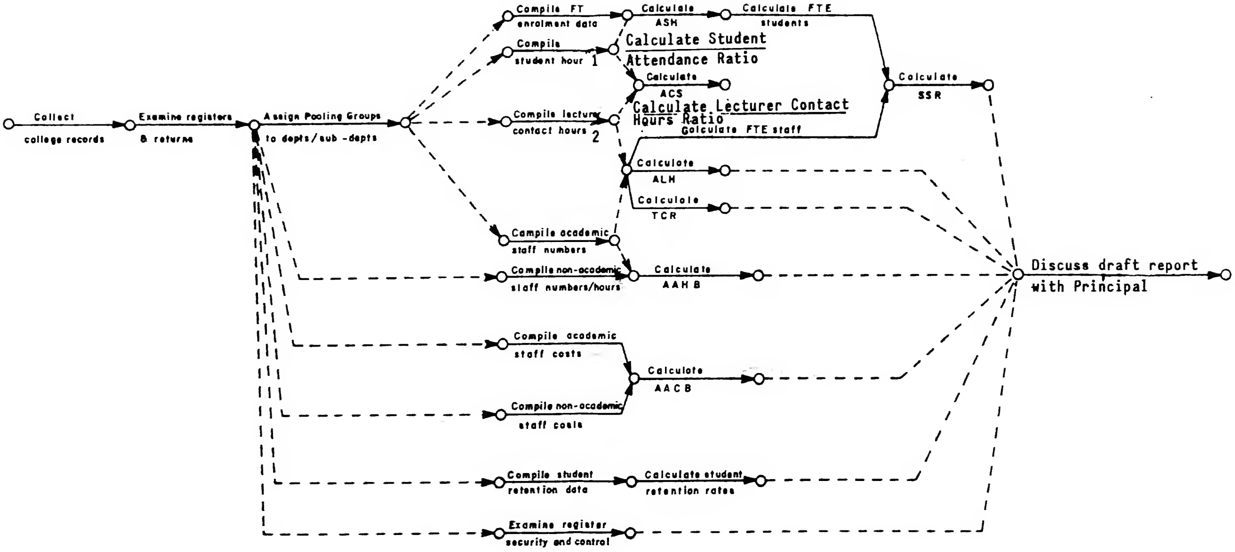
COLLEGES OF FURTHER EDUCATION

The undermentioned ratios have been derived from the data available in reports of DA audit and other reviews to date. The ratios relate only to colleges for further education and not to polytechnics.

These ratios will be revised periodically to take account of information extracted from future audit reports.

		Lower Quartile	Median	Upper Quartile
OVRR	All courses	0.82	0.86	0.89
AAHB		0.70	0.74	0.77
AACB		0.83	0.86	0.87
TCR		0.87	0.92	0.97
TCR inc. remission		0.89	0.95	0.96
Remission percentage		2.1	3.1	5.1

NETWORK OF STEPS


Collect college records
Examine registers & returns
Assign Pooling Groups to depts/sub-depts
Compile FT enrolment data
Compile student hour 1
Compile lecturer contact hours 2
Compile academic staff numbers
Compile non-academic staff numbers/hours
Compile academic staff costs
Compile non-academic staff costs
Compile student retention data
Examine register security and control
Calculate ASH
Calculate FTE students
Calculate Student Attendance Ratio
Calculate ACS
Calculate Lecturer Contact Hours Ratio
Calculate FTE staff
Calculate SSR
Calculate ALH
Calculate TCR
Calculate AAH B
Calculate AAC B
Calculate student retention rates
Discuss draft report with Principal

1. Taught and registered
2. Planned and actual

APPENDIX 3

COLLEGE RECORDS TO BE ASSEMBLED

Academic Staff Schedules (where a FEMIS I is in use)

Registers by department

Burnham return

Pooling Committee staff-student hours return and working papers (if college makes return)

Academic staff list by department showing

- grade
- dates of appointments, resignations and promotions made during year
- particulars of staff on non-standard contracts
- deduction from standard contact hours due to remission, day release etc

Non-academic staff list for staff other than maintenance, caretaking, cleaning and canteen staff showing

- dates of appointments made and resignations given during year
- weekly hours worked
- number of weeks in year worked
- overtime hours

Summary of part-time claims by academic staff showing

- course category
- claims by FT staff on PT contract
- claims by PT staff on PT contract
- substitution claims (if possible)

Lecturer timetables by department

APPENDIX 5

STUDENT/STAFF DATA SHEET

College	Pooling Group
Department	Academic Year
Auditor	Completion Date

A. PLANNED VOLUMES (POOLING RETURN) STUDENT TAUGHT HOURS/NUMBERS

B. ACTUAL VOLUMES (Registered hours)

Modes of attendance	A. POOLABLE Student hours	A. POOLABLE FTE Students	A. NON-POOLABLE Student hours	A. NON-POOLABLE FTE Students	B. POOLABLE Student hours	B. NON-POOLABLE Student hours
A. Full-time three term course						
B. Full-time course ≫1 term to 46 wks						
C. Sandwich course						
D. Part-time day/day and evening						
E. Evenings only						
F. Course lasting <1 term						
TOTAL						

TEACHING STAFF/CONTACT HOURS

	POOLABLE Contact hours	POOLABLE FTE teachers	NON-POOLABLE Contact hours	NON-POOLABLE FTE teachers	B. POOLABLE Contact hours	B. NON-POOLABLE Contact hours
Total FT & PT contact hours						
PAID PART-TIME HOURS						
Substitution						
FT Staff on PT contract						
PT staff on PT contract						
TOTAL						
Contact hours of FT staff on FT contract						

Academic teaching year .... weeks

Day release hours .... pa

Remission hours .... pa

C. TEACHING STAFF NUMBERS AND CONTRACTED CONTACT HOURS

	No	Weekly Contact hrs
HOD		
PL		
SL		
L II		
L I		

TOTAL		

Total annual contracted contact hours ☐

D. MANAGEMENT RATIOS

	Poolable	Non-Poolable
SSR		
ASH		
ACS		
ALH		

Percentage of contact hours supplied on part-time contract ☐ %

Percentage of part-time contact hours supplied by full-time staff ☐ %

ATTENDANCE RATIOS	Poolable	Non-Poolable	Overall
Student Attendance ratio			
Teacher Attendance ratio			
TCR-			
Remissions	-	-	%

STUDENT ENROLMENTS/HOURS SHEET

Department / Pooling Group ____________________

Course Category ____________________

College ____________

Academic Year ____________

Auditor ____________

Date ____________

Key: P = Planned (Student Taught Hours)
A = Actual (Student Registered Hours)

Source of Data	A FT 3 term course			B FT ≥ 1 term to 48 weeks		C Sandwich courses			D PTD or PTDE		E Evening course		F Course ≤ 1 term	
	Enrolments	Student taught hrs		Student taught hours		Enrolments	Student taught hrs		Student taught hours		Student taught hours		Student taught hours	
		P	A	P	A		P	A	P	A	P	A	P	A

Actual = Registered Class Contact Hours.

APPENDIX 6

APPENDIX 7

LECTURER HOURS SHEET

Department/Pooling Group ______________________________

College ....

Academic Year ....

Auditor ....

Date ....

Source of data	Poolable contact hours		Non-Poolable contact hours	
	Planned	Actual	Planned	Actual

STUDENT RETENTION DETAIL SHEET

Department ____________________

College ______________
Academic Year ______________
Auditor ______________
Date ______________

FT Vocational			PT Vocational						PT Non - Vocational					
Register Identification	True enrolments	Students retained	Register Identification	True enrolments	Students retained	Register Identification	True enrolments	Students retained	Register Identification	True enrolments	Students retained	Register Identification	True enrolments	Students retained

APPENDIX 8

STUDENT RETENTION SUMMARY SHEET

College			
Department		Academic Year	
Auditor		Completion Date	

Mode of attendance	VOCATIONAL COURSES		NON-VOCATIONAL COURSES		ALL COURSES	
	True enrolments	Retained students	True enrolments	Retained students	True enrolments	Retained students
Full-time (A, B, C & F)			-	-		
Part-time (D & E)						
All						

	Vocational courses	Non-vocational courses	All courses
FTRR			
PTRR			
OVRR			

APPENDIX 9

ACADEMIC/ADMINISTRATION BALANCES

College		Academic Year	
Auditor		Completion Date	

FULL-TIME ACADEMIC STAFF

	No.
Principal	
Vice-principal	
Teaching staff	

= ________ hrs p.a

Overtime = _______ hrs p.a.

Annual cost = £_______

PART-TIME ACADEMIC STAFF

Part-time hours paid in year = _________

Annual cost = £________

NON-ACADEMIC STAFF

Description	No.	Basic weekly hours	Attendance weeks p.a.	Attendance hours p.a.

Total basic attendance hours p.a.	
Paid overtime hours p.a.	
Total annual paid attendance hours	

Annual cost = £________

AAHB = ______

AACB = ______

APPENDIX 10

STUDENT/STAFF DATA SHEET

College	ALLESTREE	Pooling Group	2
Department	BUSINESS STUDIES	Academic Year	1981-2
Auditor	F. SMITH	Completion Date	18·10·82

A. PLANNED VOLUMES (POOLING RETURN)

STUDENT TAUGHT HOURS/NUMBERS

Modes of attendance	POOLABLE Student hours	POOLABLE FTE Students	NON-POOLABLE Student hours	NON-POOLABLE FTE Students
A. Full-time three term course	48924	48	168822	163.8
B. Full-time course ≥1 term to 46 wks	2790	2.7	31201	30·3
C. Sandwich course				
D. Part-time day/day and evening	7000	6·9	56256	54·6
E. Evenings only	2265	2.2	5558	5.4
F. Course lasting <1 term	276	0·3	4680	5·0
TOTAL	61255	60·1	266517	259·1

B. ACTUAL VOLUMES (Registered hours)

POOLABLE Student hours	NON-POOLABLE Student hours
42363	159734
2730	22198
6421	48937
1510	3874
276	4680
53300	239423

TEACHING STAFF/CONTACT HOURS

	Contact hours	FTE teachers	Contact hours	FTE teachers	Actual Contact hours	Actual Contact hours
Total FT & PT contact hours	4739	733	19517	2937	4539	19299
PAID PART-TIME HOURS						
Substitution			46			46
FT Staff on PT contract	132		1321		132	1321
PT staff on PT contract	403		2312·		403	2312
TOTAL	535	0·83	3679	4·87	535	3679
Contact hours of FT staff on FT contract	4199	6·5	15838	24·50	4004	15620

Academic teaching year 36 weeks

Day release hours 291 pa

Remission hours 485 pa

C. TEACHING STAFF NUMBERS AND CONTRACTED CONTACT HOURS

	No	Weekly Contact hrs
HOD	1	6
PL	1	15
SL	4	17
L II	14·1	19
L I	10·9	21

TOTAL	31	-

Total annual contracted contact hours 21089

D. MANAGEMENT RATIOS

	Poolable	Non-Poolable
SSR	9.2	8·82
ASH	28·31	28·36
ACS	12.92	13·66
ALH	17.96	18·46

ATTENDANCE RATIOS	Poolable	Non-Poolable	Overall
Student Attendance ratio	0·87	0·90	0·89
Teacher Attendance ratio	0·96	0·99	0·98
TCR-			0·93
Remissions	-	-	2·3 %

Percentage of contact hours supplied on part-time contract 17·4%

Percentage of part-time contact hours supplied by part-time staff 35·6%

STUDENT RETENTION SUMMARY SHEET

College	ALLESTREE		
Department	GENERAL STUDIES	Academic Year	1981/2
Auditor	F. SMITH	Completion Date	18.10.82

Mode of attendance	VOCATIONAL COURSES		NON-VOCATIONAL COURSES		ALL COURSES	
	True enrolments	Retained students	True enrolments	Retained students	True enrolments	Retained students
Full-time (A, B, C & F)	93	86	-	-	93	86
Part-time (D & E)	382	321	270	184	652	505
All	475	407	270	184	745	591

	Vocational courses	Non-vocational courses	All courses
FTRR	·92	—	·92
PTRR	·84	·68	·77
OVRR	·89	·68	·79

APPENDIX 12

ACADEMIC / ADMINISTRATION BALANCES

College	Allestree	Academic Year	19 81/82
Auditor	F. Smith	Completion Date	18 10 82

FULL - TIME ACADEMIC STAFF

	No
Principal	1
Vice - principal	1
Teaching staff	123·4

= 142956 hrs p a

Overtime = — hrs p a

Annual cost = £ 790,125

PART - TIME ACADEMIC STAFF

Part - time hours paid in year = 8653

Annual cost = £ 43,276

NON - ACADEMIC STAFF

Description	No	Basic weekly hours	Attendance weeks p a	Attendance hours p a
Technicians	6	36	46·2	9979
Technicians	3	20	38	2280
Clerical & Professiona	21	36	46·2	34927
Clerical	2	36	38	2736
Librarian element				
of Tutor / Librarian	0·6	30	38	684

Total basic attendance hours p a	50606
Paid overtime hours p a	630
Total annual paid attendance hours	51236

Annual cost = £ 161,280

A A H B = 0·75

A A C B = 0·84

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Annex

STUDY OF FURTHER EDUCATION COLLEGES - FINAL AND INTERIM REPORTS

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2 The Need to Improve College Register Design 14

PART 1 - INTRODUCTION

1 This is the Final Report of a study of Colleges of Further Education, carried out in January-June 1981 to support the Local Government Audit Service.

2 The purpose of the study is to support the Service in their 'value for money' examination of colleges.

3 An Interim Report was circulated in May 1981 and has elicited valuable contributions from a number of interested bodies eg CLEA, The FE Staff College at Coombe Lodge, DES (Financial Services). Some minor amendments are given in Appendix 1. This final report:-

- re-emphasises the salient findings and gives 8 recommendations of the study
- takes up the more substantial comments of these bodies
- introduces specific detailed guidance for the local government auditor about to examine a FE college.

4 This final report should be read in conjunction with the Interim Report. Where the reader needs to refer back, the Interim Report paragraphs have been shown in brackets, thus (IR 21-24).

5 Since the Interim Report, the study team has developed a guide for auditors. We have tested it on five colleges with assistance, in 3 cases, from local district audit staff. This guide is introduced in Part 3 of this report. The guide as a whole is a separate book.

PART 2 - CONCLUSIONS AND PROPOSALS

6 The conclusions in the Interim Report, and the recommendations of actions which they imply, may be summarised as follows:

- **Government of Colleges** - the chain of accountability is uncertain. The policy in DES Circular 7/70 needs review
- **Marketing** - the tasks of finding out what the market needs, avoiding overprovision, and closing down under-supported activities, require more rigorous and penetrating treatment. Those responsible for doing it need to be clearly defined. This links with 'accountability' above.
- **Curriculum Development** - it seems wasteful for individual colleges to develop their own curricula for many courses, as is the propensity to tailor courses to the academic year or term
- **Academic Establishment** - the Burnham calculation actively encourages over-teaching and the overprovision of courses at higher categories of work
- **Teaching Hours** - no account is taken of the type of teaching, and its concomitant preparation and correction, when setting the hours a lecturer is to teach. Experienced and senior lecturers teach for fewer hours than newcomers to the profession - a questionable use of expensive resources
- **Remissions** reduce lecturers' teaching time. There is a case for divorcing remissions from teaching time and including them in the remaining attendance time
- **Efficiency and Effectiveness** - the resources used in FE are big enough to merit a quantified approach to their efficient use. The DES control ratio approach should be extended to all colleges - and perhaps into departments - and should cover all work
- **Control Information** - information is generally plentiful for planning, but there is a need to standardise the methods of compiling it. Control information is deficient; the format of registers should be standardised to cover the control information needed by the college, the LEA and the DES. There can be no tight management of resources until this is done.

Government of Colleges (IR 12 to 16 and 100)

7 There is no chain of accountability for FE Colleges. For any particular college, the exercise of control depends on the relative power, objectives, motivation and personality of the principal and of the dominant individuals in the local education

committee and department, of the governing body and of the academic board. This is the practical consequence of DES Circular 7/70, dated 14 April 1970. The Education Act, 1944, (Section 7) requires the local authority to secure the availability of education in its area. The DES Circular has weakened and in some cases effectively removed the authority's power to make it happen. It has created Governing Bodies which are autonomous for all issues except finance and staffing. Although there are powerful reserve powers, they do not enable the LEA to decide what is to be taught and to what types of student.

8 Practice varies from LEA to LEA, but there is no doubt that many see Circular 7/70 as seriously impeding their discharge of the responsibilities assigned to them under the Education Act. The Macfarlane Report on Education for 16-19 year olds (December 1980) comments in paragraph 64 on a similarly hindering feature in the LEA's direction of secondary schools.

9 The time seems opportune for reviewing these apparent anomalies. This conclusion is to some extent supported by the current review of the legality of further education being carried out by a joint working party under the chairmanship of N B W Thompson of the DES. Whatever eventuates, there can be no radical change in the method of taking managerial decisions by LEAs, Governors, or Principals until there is a quantitative control system which provides the same information, understood in the same way and comparable nationally, to all of them. The approach to a quantitative basis for college management is covered in paragraphs 27 to 44 below.

Marketing (IR 104 to 108)

10 On the subject of marketing, we deal with the issues raised in the Interim Report under the following headings:

- The Need for Courses (IR 17 to 22, 100)
- Approval to Run a Course (IR 24 to 31, 101)
- Overlap/Duplication (IR 32 to 33)

11 In paragraphs 104 to 108 of the Interim Report, we put forward that the marketing function - in the fullest commercial sense of the word - was weak or non-existent in most FE Colleges. The FE Staff College has drawn our attention to their Working Paper (Information Bank No 1325) which confirms the view we gained at our visits to the sample of colleges. Establishing what courses are needed - the first step in the marketing process - appears to receive more attention in the advanced education sector than in the non-advanced because applications to run such courses have to be referred to the Regional Advisory Council, H M Inspector, and in some cases the DES. Demand for the course is one of the factors on which the RAC needs to be satisfied but we do not know whether the RAC has the capability to check the demand foreseen by the college.

12 We found no evidence of the objective study of market-need. Mostly the need was established either by the number of direct requests and enrolments or through the personal contact networks of individual lecturers with local organisations

and businesses. There seems to be little formal and rigorous market research - the college is not organised or staffed to do it, and the Education Departments covered in the study did not appear to see it as their job.

13 The avoidance of overlap and duplication is covered by the RAC process for advanced courses but not for non-advanced. At first sight it would appear to be logical that the RAC approval process should also apply to non-advanced courses, but our attention has been drawn (very late in the Survey) to the protracted process involved. We understand that approval to run a course can take as long as five years from the date of the first idea to the date of DES approval.

14 Even if this process could be reduced to one year, it would be too long as a checking procedure for non-AFE courses because they need to be mounted quickly when urgent local needs appear. But the prolonged elapsed time raises the further question of whether it is possible to establish market-need for something which will not be operating for 3-5 years. This may account for the evidence we received that 'the majority opinion in AFE would endorse the Oakes recommendation that the AFE course approval system should be scrapped. It should certainly not be extended to NAFE; the necessary control can be achieved by other means such as SSR norms'. But we adhere to our view that, until such norms can be seen to be having an influence upon colleges, some checking system - external to the college - is as necessary for non-AFE as it is for AFE.

Curriculum (IR 54 to 59 and 102)

15 One of our findings in the Interim Report (IR 102) was the persistence of the academic year or term as a basis for designing course programmes and lengths. Most colleges are substantially committed to supporting industry and commerce, and its attendant institutions such as the MSC/TSD and Trades Unions, none of which limit their working year to 36-38 weeks. So the academic year has no relevance for much college work. Operating over a full year will commend a college to its industrial and commercial customers by making it easier for them to programme their training. And it is likely to improve its image with the public which at present is perhaps rather inclined to see the FE lecturer's working conditions as easy going.

16 The Council of Local Education Authorities has pointed out to us that the conditions of service for FE staff already allow for a college to be open up to 48 weeks a year although the individual lecturer's teaching weeks are limited to 36. Obviously in extending the period during which the college is open, regard must be paid to the overall effects upon the use of lecturing resources.

Lecturer Resources

17 Within the subject of lecturer resources, we take up the issues raised in the Interim Report under the headings of:

- Academic Establishment (IR 66 to 71 and 109 to 110)
- Student-Staff Ratio (SSR) (IR 72 and 73)
- Teaching Hours and Remissions (IR 74 to 78 and 111 to 117).

18 These four topics are interlinked. Understanding them depends on a knowledge of the Burnham calculation used to set the proportions of lecturers by grades, of the categorisation of work into advanced and non-advanced, of the limits to the teaching hours per week applicable to each grade of lecturer, and of how these teaching hours can be partly remitted if a lecturer has a significant burden of non-teaching obligations.

19 Details of the Burnham calculation are given in Part III of Appendix II A of the Scales of Salaries for Teachers in Establishments for Further Education in England and Wales issued by the DES through HMSO. The relationships with SSR, teaching hours and remissions are discussed in a Coombe Lodge Working Paper (Information Bank No 1396).

20 In essence, the facts are that the Burnham calculation contains incentives to:

- maximise enrolments
- maximise student-hours
- concentrate on courses at 'higher' academic levels
- minimise class size.

21 The consequence is that the productivity and costs of lecturers are worsened. There are also some educational disadvantages: a tendency to over-teach, and a tendency towards classes which are too small to generate internal energy and a motivating liveliness.

22 The Burnham calculation has been used for many years as part of a procedure for setting academic establishment. But that is not its prime purpose. Its prime purpose is to set the salaries of the Principal, Vice-Principal, and Heads of Departments. Its influence over lecturer resources is in stipulating the broad bands of the proportions of the various grades of lecturer depending on the volume of each category of work. Within those broad bands the LEA chooses which percentage is to be used.

23 The LEA also has some freedom of choice on two other matters: teaching (contact) hours and remissions. The National Joint Council (for Further Education Teachers in England and Wales) has negotiated:

- teaching (contact) hours/week in the following bands:

  Lecturer 1 : 20-22
  Lecturer 2 : 17-20
  Senior Lecturer : 15-18
  Principal Lecturer : 13-16

- the principles governing the granting of remissions of contact hours for certain non-teaching duties

24 Precise application in a given LEA is a matter for local decision, with or without prior negotiation. This is especially the case with remissions where, although there is a generally agreed core of activities qualifying for remission, there is a range of other duties which may or may not be so regarded by different LEAs.

25 The upshot of these complexities is twofold:

- principals and governing bodies of colleges have limited scope for the economical use of lecturers because they do not control lecturer grades, teaching hours, or lecturer numbers

- comparisons with national norms are less informative than they would otherwise be because LEAs differ in their choice of teaching (contact) hours (IR 74) and in their practices with remissions (IR 77 and 78).

26 The degree of control left to college principals and governing bodies is to ensure that:

- through careful timetabling, the lecturing staff are programmed for teaching - in however wide a sense - for as many of their 'contracted' hours as possible (see paragraph 23)

- remissions of teaching (contact) hours are minimised

- course programmes are checked to

  - eliminate over-teaching
  - ensure they are not extended to fill the academic term or year

Performance Index for Productivity

27 The degree to which the control of such productivity factors is being successful is best monitored by watching the student-staff ratio (SSR) (IR 72-73). This, together with several supporting ratios, is currently collected by the Pooling Committee from a 20% sample of further education colleges. Consequently the basis for its extension to all colleges already exists. Indeed, the audit procedure which will be introduced in Part 3 of this report is based on the work previously done by the Pooling Committee. The DES is also considering the extension of the Pooling Committee survey to cover all colleges of further education.

28 The use of the SSR as a monitoring instrument for college management and for the auditor pre-supposes that the data necessary to derive it accurately is accessible. In fact, in many colleges it is not. This is so even in some colleges which have been completing the Pooling Committee survey for the past two years. Some of the figures shown in their returns are estimates based upon available records which do not always closely relate to the data actually asked for. If accurate information is to be obtained for college management, Pooling Committee and audit purposes, and obtained with minimum effort, it is essential to reconsider the design of the source documents for this information - college registers. This important subject is considered in more detail in Appendix 2.

29 A college will only gain value from calculating its SSR if it is able to compare it with those of other colleges who have used identical bases and methods of

calculation. The Pooling Committee survey provides this basis if the register problems referred to previously can be overcome.

30 We did encounter some reservations by college principals about applying to both advanced and non-advanced work an approach which was originally designed to cater only for advanced work. Part of this problem relates to the assigning of courses to Pooling Groups, where Group I is laboratory/workshop-based work and Group 2 is classroom-based work. The distinction is made because Group 1 work tends to have lower SSRs than Group 2 work.

31 To take catering as an example of the problem as seen by one principal. Advanced courses tend to have a high classroom element. Non-advanced courses are more like workshop-based courses with a high element of closely supervised work in bakeries, kitchens and college restaurants. The 1979/80 Pooling Committee return places both in Group 2. Thus the college which has a catering department with a high volume of non-advanced work is unfairly discriminated against in SSR comparisons.

32 In passing, we note that CIPFA treats both types of work as Group 1 (Financial Information System for Institutions of Higher and Further Education in the Maintained Sector - Manual of Guidance - June 1980). A similar anomaly occurs with mathematics which is classified as Group 1 for Pooling purposes whilst CIPFA place it in Group 2.

33 Whilst there is the need to achieve greater clarity of definitions it is our view that the Pooling Committee's approach to SSR calculations is a sound basis on which to progress. We have been told that from the 1980/81 academic year the return will distinguish between poolable and non-poolable grade II/III work.

34 It is also our view that with adequately designed register systems and the computer facilities which many colleges now possess the calculation of the SSR and associated ratios could be performed automatically from a data base which also provides for the Burnham and Pooling Committee requirements. This approach is already being followed by some colleges, and is the subject of a development project at the FE Staff College.

Other Performance Indicators

35 Two other performance indicators are proposed for college management: the academic/administration balance and the student retention rate.

36 The academic/administration balance is a measure of the resource input from academic staff as a percentage of the total resource input from academic and academic-support staff. The ratios should involve both hours and costs, because the academic and non-academic pay structures are dissimilar and are determined at different times. Its trend should be measured annually.

37 The student retention rate reflects the ability of the college to keep its students once enrolled and attending consistently. Thus, it is an easy rough and ready indicator of consumer satisfaction. When the index for a course falls below some defined standard, it is of interest to the course tutor, the head of department and the

principal. We recommend it should be derived and considered at week 12 of the course, 6 weekly thereafter, and the end of the course. It takes about 2½ minutes per register, assuming the attendance information is up to date.

38 We tried early in our study to develop an index of the use of physical facilities (IR 87 and 91). Although most colleges were able to furnish us with details of teaching spaces and their sizes and purposes, no record was kept of their use. Nor do we consider now that any routinely kept record would be useful.

39 Such information is needed only when an alternative use for apparently unused facilities is being considered or when proposals are being made for more space to be provided. In each of these situations, an activity sampling, arranged at the time, will usually give enough information for taking a decision.

Efficiency, Effectiveness and Control Information

40 There is little to add in this final report to what was said in IR 119 to 120. Notwithstanding the important planning and controlling function of the establishment and financial limits set by the local authority's budgetary process, in controlling efficiency, the comparison will always be between inputs and outputs.

41 . Although there are important non-academic inputs, such as those of the administrative staff, we have taken lecturer-hours as the key inputs because:

- they can be measured
- they correlate with the biggest single cost in FE
- they are unaffected by inflation
- they can be readily recorded.

42 For similar reasons, we have taken student-hours as the output measure. The FE Staff College has a different view. They feel that emphasising student-hours helps to perpetuate the undesirable consequences of the Burnham agreements (paragraphs 20-21 above). They suggest an output measure based on student numbers or full-time equivalent students enrolled. We are not convinced but, for lack of direct experience, we do not oppose strongly. We would certainly agree that achieving a high student-hours output must not be brought about through over-teaching. It must always be interpreted in relation to a reasonable number of weekly taught hours.

43 What we do hold to strongly is the necessity for nationally adopted, uniform, and auditable measures of input and output, and for a disciplined, uniform and auditable system for recording the inputs consumed and the outputs achieved. In this connection the system initiated at the Stockport College of Technology and being developed by the FE Staff College merits attention.

44 Whatever new approach is eventually adopted, we see no alternative to a thorough review of the register system towards creating a reliable record of what has actually been consumed - the lecturer's time - and what has actually been produced - the duration of the student's exposure to the lecturer. This is not the whole of a study of value for money but it is an essential ingredient of it, and an essential tool in the overall management of a college's main resources. Detailed comments and recommendations are set out in Appendix 2.

The Future

45 If, in the future, the development work on the recording and measurement of colleges' inputs and outputs leads to a situation in which there are:

- nationally derived norms for use as reference criteria
- auditable, uniform, recording systems which supply the data to derive the national norms and the individual college's indices

then many of the misgivings arising from this study may be expected to begin to cure themselves. For example, if colleges are required to pursue high student-staff ratios, there will be little need for a national institution to vet proposals for courses. The colleges will themselves confirm that the demand genuinely exists because to run a poorly supported course will put their SSR at risk.

46 Further, if there can be a national system on the lines of those which work on SSR, it is probable that most other ratios for control can be dropped. We believe that at the level of the LEA the key control efficiency indices could be the SSR and the retention rate alone. Both these are probably easily auditable.

PART 3 - AUDITS OF COLLEGES

47 We have devised an audit procedure which is based on the Pooling Committee SSR and associated ratios. These have been supplemented by ratios designed to determine

- the effects of staff remission

- the extent to which full-time staff meet the contact hours required of them by their full-time contracts

- the extent to which full-time staff are paid additional money on part-time contracts

- academic and administration hours and cost balances

- student retention rates.

48 The audits of colleges will be the responsibilities of local District Auditors and Approved Auditors. To assist them we have written a manual entitled "Colleges of Further Education - Guide to the Measurement of Resource Efficiency". It has been written in sufficient detail to permit an audit to be carried out irrespective of the state of the college record systems. It describes

- the typical organisation of colleges
- relevant aspects of the Burnham system
- relevant aspects of the Pooling Committee system
- alternative approaches to collecting data
- calculating the ratios
- interpreting the ratios.

49 Despite the detail contained in the manual we are of the opinion that some training is required before attempting to measure a college. This arises not only from the need to have a good understanding of the Burnham and Pooling systems but to avoid the confusion which arises from their different definitions of basic terms eg student hours. We would recommend that each District and Approved Auditor has one of his staff specially trained in the approach so that support can be provided for local auditors.

50 The duration of an audit is necessarily dependent on the size of the college and, more importantly, the state of its records. An audit of a medium-sized college with a good standard of record keeping and supervised by a trained auditor requires 6-10 man days work. If the records are not complete the effort could increase by 50% to 100%. When faced with the latter situation it may be appropriate to limit the audit to recommendations for improved record keeping (see Appendix 2). If this course is adopted, however, it is likely to be a further two years before the college is measured. It will take this long to obtain a set of good records for a complete academic year.

51 The possible extension of the Pooling Committee system for collecting student and staff data from about 100 colleges to all 600 has the potential to make the auditor's task easier. At present he must expect to compile data for the five colleges in six which do not contribute to the Pooling survey before he can make any analysis. This is a time consuming process. In principle, he should not have to do this for the one college in six which does contribute. In practice, our experience is that participating colleges are not necessarily amending incomplete record systems to satisfy the requirements of the Pooling survey. As a consequence, they are having to spend a considerable amount of time attempting to derive the most easily obtainable approximation to the survey requirements. Sometimes these approximations are found to be so wrong as to be unusable. It is to everybody's advantage that sound record systems are implemented. The local auditor is in a very good position to encourage this and should take every opportunity to do so through his local authority and college contacts.

52 Although the early years of college measurement are likely to be concerned principally with improving the records systems and ratio analysis, we recommend that it should be subsequently developed into a parallel approach by the Auditor and the HMI, the former concentrating on assessing college efficiency and the latter on educational effectiveness.

53 The relationship between the two can be illustrated as follows. The auditor can establish the average taught hours received by a full-time student and say how it compares with the national pattern. It is not within his competence to say whether the value can be improved for that particular college. This depends on a variety of factors including the background of the students, the quality of the teaching staff and the methods of teaching and learning used. These are educational matters which are the province of the HMI.

54 The ratios we have used must require revision from time to time. Because of the desirability of 'not re-inventing the wheel' we have adopted as part of the approach the ratios developed by the Pooling Committee. We assume that these will undergo development. Such developments must be incorporated into the manual since the national comparison ratios are based on them.

APPENDIX 1

AMENDMENTS TO INTERIM REPORT

(Based on comments from CLEA, Coombe Lodge, and others)

Page 3	Paragraph 10. The lines joining the VP & CAO to the HODs is intended to be dotted. This is not clear as printed.
Page 12	Paragraph 44, first sentence. For "declines", read "may decline".
	Paragraph 48, first sentence. For "Schools Inspectorate", read "HM Inspector".
Page 15	Paragraph 66, second sub-paragraph, for "LEA", read "Education Committee".
Page 16	Paragraph 74, first sentence, amend to read "………. by national agreement between the FE Management Panel and the FE Teachers Panel to 38 weeks ……….."
Page 20	Paragraph 88, for "10 Queen Anne Street", read "a subsidiary of Longmans".
Page 22	Paragraph 99, 4th line, for "instrument", read "articles".
Page 25	Paragraph 121, for "extent", read "extend".
Page 40	The graph illustrating paragraph 40 was omitted from the first reprint. Paste-in copies are available from the Audit Inspectorate (J Sprigg), St Lawrence House, 29/31 Broad Street, BRISTOL, BS1 2EX. Tel Bristol 211551 Ext 43.
Appendix 6	Revised version overleaf.

DEMAND SENSING BY THE MANPOWER SERVICES COMMISSION (MSC)

The MSC collects and disseminates labour market information both in support of its own programmes and to outside organisations on request. Such information is considered vital in the planning of MSC training provision since the primary objective of its training schemes is to provide individuals with marketable skills in response to national and/or local labour market demand.

The primary need is to identify occupational skill shortages both current and emergent. To this end information is gathered from a wide variety of national statistical sources, and this is supplemented by regular surveys, reports by ITBs, Sector Working Parties and other authoritative bodies, and local contacts with employers. Predictions about future labour market movements are derived mainly from an economic model developed by the Manpower Research Group at Warwick University in co-operation with MSC.

MSC officials monitor trainees' in-course progress as closely as possible, and take a great interest in the results of their subsequent employment search. For example, all trainees supported by the MSC's Training Opportunities Scheme (TOPS) are followed up 3 months after completion of their courses to see the extent to which they have succeeded in finding relevant jobs. The follow up results, which provide a further indicator of labour market demand, are also used to measure the cost-efficiency (cost per completion) and cost-effectiveness (cost per placement "in trade") of TOPS provision.

THE NEED TO IMPROVE COLLEGE REGISTER DESIGN

During this study we visited over 40 colleges in 13 different local education authorities. We examined the registers used by all. Not surprisingly, we found that they were generally able to cope with the data required to complete Burnham returns. This is one of the principal purposes for which they were designed.

Only exceptionally did we find that these registers were also capable of meeting the requirement for accurately completing a Pooling Committee return. The deficiencies were mainly associated with full-time registers which provided no information on student taught hours or lecturer contact hours. In some cases we were able to derive this information by referring to course timetables. In other cases this was either not possible or not practical. This applied specifically to courses which offered a range of subject options (eg full-time GCE courses where subjects are selected to meet individual needs) and where a single register was kept for the course - a common practice.

We came across colleges which have been contributing to the Pooling Committee return for the past two years, and who are expecting to contribute to it again for the recently completed academic year, who have not altered their register design to generate accurate data. Each year they do their best to complete the return by a variety of approximations which are frequently time-consuming for them and which do not always achieve a sensible result. Examples of the approaches they use are as follows:

- student taught hours are obtained by subtracting morning and afternoon coffee/tea breaks from the timetabled hours used in the Burnham student hours calculation. We examined courses where this process gave 27½ student taught hours and found that the accurate values varied between 20 and 24 hours

- the return is compiled from the nearest approximation which can be obtained from information provided by the college's computer system. An examination of the output provided for the Pooling return showed that full-time students of that college were shown as having only two thirds of the taught hours they actually received

- lecturer contact hours are calculated from staff timetables. These are prepared before the college year actually starts and do not necessarily reflect what actually happens during the next twelve months. Some courses do not start because of lack of enrolments. Others take place which were not foreseen. Some staff leave during the year and their work is actually undertaken by staff on part-time contracts, which gives rise to double accounting of hours.

We believe that college registers should be designed to provide the base data needed to service both the Burnham and Pooling Committee systems. It is likely that there are also other requirements which have not been the direct concern of this study eg the FESR return.

It is apparent that the initiative for modifying register systems, with some exceptions, is not being taken at local authority or college level. We see the need for a lead to be given to the LEAs, possibly through the Department of Education and Science. The argument for this is given added emphasis by the following:

- consideration is being given to asking all colleges of further education to complete the Pooling Committee survey in the next year or two, rather than the present 20% sample. It must be assumed that the great majority of the colleges not presently contributing do not have the systems necessary to complete it accurately

- we came across several colleges which are interested in developing, or have developed, computer-based college management information systems. Modifying these systems is time consuming. It is important, therefore, that those responsible for them are given a clear indication of the information they should be capable of producing. Some work on this has been done at the FE Staff College (Further Education Management Information System - 'FEMIS') but we did not get the impression that it is widely known about within the colleges we visited.

The major problems we encountered in attempting to compile the Pooling-based audit ratios would be eliminated if local authorities could be persuaded to make their register systems conform with the following.

Full-time registers

- Each register should have a unique number cross referable to the Burnham return and Pooling return working papers

- Where a course provides subject options (eg GCE courses) a separate register should be kept for each subject. A master register should be kept to show all enrolments on the course

- Each register should have fields on its front cover to show

    - the number of enrolments used for the Burnham student-hours calculation

    - the weekly student timetabled hours supplied by each department

- the weekly taught hours supplied by each department or Pooling Group within department

- the number of weeks used for the Burnham student-hours calculation

- the total student hours, by department, used for the Burnham calculation before and after applying the standard Burnham multiplication factors of 95% or 110% depending upon course type

- the total student taught hours used for the Pooling Committee return for each department, or Pooling Group within department

- the weekly and total lecturer contact hours supplied by each department, or Pooling Group within department.

Part-time registers

- Each register should have a unique number cross-referable to the Burnham return and Pooling return working papers

- Where a course provides subject options (eg TEC courses) a separate register should be kept for each subject

- Each register should have fields on its front cover to show

    - the total student hours used for both the Burnham and Pooling Committee returns for each department or Pooling Group within department

    - the total lecturer contact hours supplied by each department or Pooling Group within department.

The above proposals are not meant to provide a complete register specification. We have not included essential data which was usually found to be present eg course title, academic year, course category.

The adoption of these proposals by local education authorities would benefit

- colleges, by enabling them to complete Pooling Committee returns with much less effort than at present

- the Pooling Committee, by providing it with more accurate information for control purposes

- the local auditor, by enabling him to restrict his task to checking the accuracy of data rather than compiling it from base data as he has to at present in many cases.

September 1981

DEPARTMENT OF ENVIRONMENT
AUDIT INSPECTORATE

STUDY OF FURTHER EDUCATION COLLEGES
INTERIM REPORT

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PART 1 - INTRODUCTION

Origin of Study

1. This is a report of a study of a sample of Colleges of Further Education. It follows on from the study of Polytechnics carried out in 1979 and it was foreshadowed in the Annual Report of the Chief Inspector of Audit for 1980. This study has been carried out to support the District Audit Service in their examination of expenditure on further education. It took place at local education authorities (LEA) and colleges with whom arrangements were made by the District Auditors. During the study consultations were held with the Financial Services Directorate of the Department of Education and Science (DES), the Training Services Division (TSD) of the Manpower Services Commission, and Her Majesty's Inspectorate of Schools (HMI).

Staff

2. The study team consisted of:

Leader:	J Sprigg	District Audit Service
	D R E Calf C M McArdle	of the P-E Consulting Group

3. Staff from The P-E Consulting Group acted as specialist associates to district audit staff rather than in the more usual consulting role.

Scope of Study

4. The study consisted of interviews with officers of 12 LEAs followed by a visit by one of the team to a total of 31 colleges in England and Wales. Some more colleges have been included in the study by using data provided by district audit staff not working as part of the study team, or by LEA.

Subject to a predetermined mix of urban and rural examples, the selection of LEAs was random. Within the authority area, the choice of colleges was by the LEA.

5. It was orginally planned to visit about 60 colleges (10% of all colleges in England and Wales) and their associated LEAs. This was abandoned when it became clear that repetitive information was coming consistently from the colleges already interviewed. It was felt that the time would be better spent following up in greater depth some of the leads already given.

6. The team have also interviewed:

- The Chief Inspector (FE) and one District Inspector of HM Inspectorate of Schools
- 6 members of MSC/TSD
- The Director of Financial Services and the Chief Accountant at the DES
- The Director, Mr Wheeler and Messr D Birch and R Cuthbert at Coombe Lodge, Further Education Staff College, Blagdon.

7. The study was also discussed with some members and officers of the Council of Local Education Authorities (CLEA).

Programme in College

8. The time at each FE College was usually spent as follows:

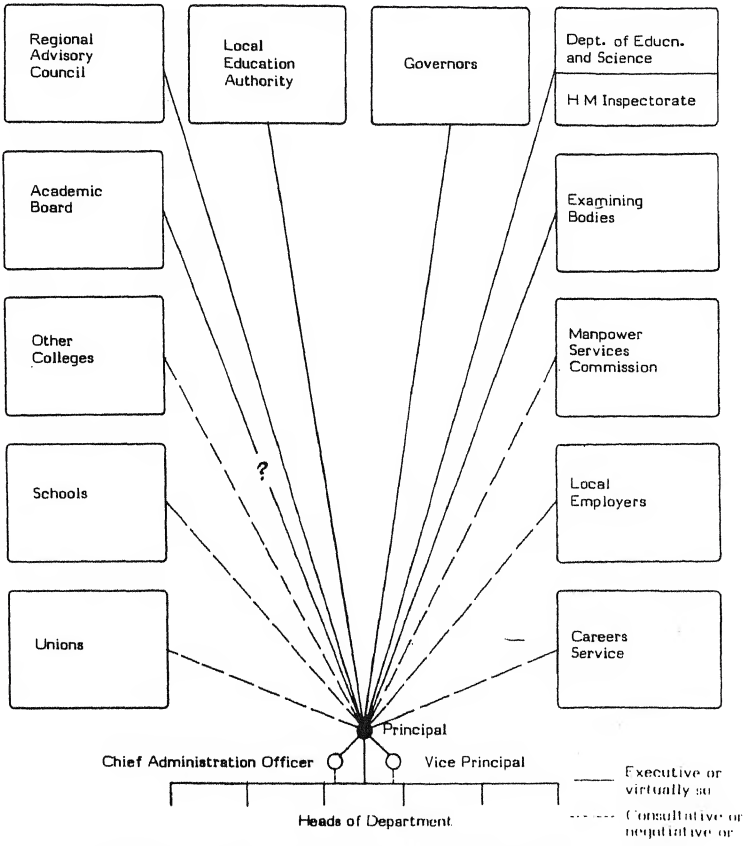
- 1 to 2 hours, interviewing the Principal usually with either the Vice-Principal (VP) and/or Chief Administrative Officer (CAO) present
- ½ to 1 day with the VP and/or CAO assembling data to derive control ratios
- ½ day sampling the class registers for information to calculate the attendance rates.

9. A summary of the questionnaire used and the list of ratios collected is given in Appendix 2. Tabulations of the ratios collected are given in Appendices 3 and 4.

PART 2 - THE MANAGEMENT OF FURTHER EDUCATION

Management System

10. The system for managing the academic work of a college may be summarised as follows:


Regional Advisory Council
Local Education Authority
Governors
Dept. of Educn. and Science
H M Inspectorate
Academic Board
Examining Bodies
Other Colleges
Manpower Services Commission
Schools
?
Local Employers
Unions
Careers Service
Principal
Chief Administration Officer
Vice Principal
Heads of Department
Executive or virtually so
Consultative or negotiative or servicing

(Note: The diagram is not to imply that the college's communication with its 'outside' world is ONLY through the principal. Much contact is between subordinate staff at both ends).

11. In addition to studying the general operation of the system, the study also explored in more detail the 3 specific areas:

Courses

- establishing the need for a course
- getting approval to run a course
- reviewing the need to continue a course
- establishing the size of classes
- over-provision of similar courses in colleges within travelling distance
- closing or combining under-subscribed courses
- setting the curriculum and its sequence
- marketing.

Academic resources

- setting establishment
- teaching hours and remissions
- matching levels of work to staff.

Control information

- the measurement of efficiency and effectiveness
- the provision of valid control information.

Government of Colleges

12. It has been difficult to draw a clear picture of the formal arrangements to be adopted in local authorities and colleges for setting policy and objectives and for planning and supervising the educational work to be done at lecturer-student level. Practical interpretation of the intentions of Parliament has been delegated via local authorities to the colleges themselves and in some respects into the individual teaching departments within colleges.

13. The Education Act, 1944, (Section 1) requires the Secretary of State 'to promote the education of the people..... and the progressive development of institutions to that end, and to secure the effective execution by local authorities of the national policy for providing a varied and comprehensive educational service'. Section 7 of the Act identifies "further education" as the third of three progressive stages of education. The same section requires the local authority to secure that the education shall be available to meet the needs of the population of their area. There is no definition of the word 'education'; the same section implies that it is to contribute to the spiritual, moral, mental and physical development of the community.

14. In Circular 7/70, dated 14th April 1970, the Department of Education and Science provided detailed guidance on the arrangements the local authority should adopt for governing its Colleges of Further Education. These notes provide for a governing body, and include model articles specifying its constitution, powers and duties, including those of such associated individuals as the Principal, Vice-Principal and Chief Administrative Officer. The circular mentions nothing about setting objectives, making policy, or how 'education' is to be provided in practice. But in the model articles, the circular makes provision for an academic board for each college. If the model articles are followed, an academic board is created, charged with the responsibility for the planning, co-ordination, development and oversight of the academic work of the college, including arrangements for the admission and examination of students.

15. Our discussions with Principals and Vice-Principals reveal that, in practice, the arrangements for directing and managing the teaching resources and their administrative supporters vary not only from authority to authority but from college to college. The factors which determine this variation appear to be:

- the tightness of the controls over staffing, finance, the initiation and closure of courses, the number of students in a class
- whether these controls are exercised at LEA level or delegated to the Principal
- whether the Principal exercises his controls alone or under the influence of the governors and/or the academic board.

16. Just where the control lies for any particular college depends on the relative power, objectives, motivation and personality of the Principal and the dominant individuals in the local education authority, the governing body and the academic board. Our interviews with officers of LEAs and with Principals confirmed this situation. Consequently we have been unable to identify a clear chain of accountability.

The Need for Courses

17. Some courses are set up to meet a national need. Generally, however, the need for courses arises mainly from local demand as follows:

	Local Employers	**Job Seekers & Working Population**	**General Public**
Recognised qualifications eg, TEC, BEC, C & G, HNC, ONC, degree, A level, O level	Yes	Yes	Small demand
Craft skills eg, welding, woodwork typing	Yes	Yes	Small demand
Leisure activities eg, languages, arts, sports, crafts	No	No	Yes

18. The ultimate proof of need is whether people come forward to enrol as students.

19. Many courses run from year to year almost as a tradition. Others are new courses for which there has to be some way of detecting the need. This is done in various ways:

	Frequency of responses from 29 respondents
by individual lecturers phoning or visiting a network of contacts in local industry	18
by the regular advisory committees or panels of representatives from local industry	20
by panels of local industrialists who can be convened when needed	1
by direct approaches from training officers who need courses eg: local firms and, especially, the Training Services Division and the Industrial Training Boards	29
by asking local authorities about planning applications for industrial development from new employers who may need to train staff	5
by analysing requests to attend courses run by other authorities, which are not available locally	3
by asking schools and the local careers office and job centres	11
by mailshot questionnaires	1
by academic staff foreseeing future demand and opportunities	6
by desk research	1
by arranging courses for the new qualifications conceived by the examining bodies (BEC/TEC/C & G) and watching enrolments	6
by identifying local areas of redundancy or unemployment	4
on behalf of priority groups eg. immigrants, mentally or physically handicapped.	6

20. It is reasonably clear that the task of keeping abreast of course need is bound to fall mainly on the academic staff, either for contacting industrial contacts or for attending advisory committee meetings.

21. A few Principals expressed misgivings about the time spent on regular advisory panel work and on their propensity to serve mainly the interests of those serving on them. It was also clear that whether an individual lecturer serviced his contacts effectively depended much on his personal inclination. We came across one authority that had surveyed local companies on the service they were getting and had established marked differences between the colleges under its jurisdiction.

22. In general, the conclusion of the survey is that apart from responding to direct requests and the ultimate acid test of enrolments, the attitude to establishing the need for a new course is casual and haphazard.

23. By comparison, the approach used by the Training Services Division of the Manpower Services Commission might be of value to the further education service even though TSD is in the business of training rather than education and in a narrower sector, mostly at the level of categories IV and V. Some notes on the Burnham course cagetories and on the TSD approach are given in Appendices 5 and 6.

Approval to Run a Course

24. Approval to run a course is not left entirely to the Head of Department or to the lecturer concerned. Two further steps, at least, are involved:

1. within the college, to see that the "educational character" of the college is appropriate, to see that suitable lecturers and teaching facilities are or can be made available, to see that other courses will not suffer.

2. outside the college, to see that the needs of the local community, especially industry are met; and to see that there is no duplication leading to over-provision.

25. At the level of the college, our survey suggests that the Principal generally has the power of approval. Whether he always takes the decision jointly with the academic board and/or the governors was not explored, but 20 Principals out of 29 said that they did so refer such decisions.

26. Above the level of the college, a formal and apparently effective system exists to approve a college's proposal to offer a course involving advanced work - broadly work higher than the ONC or GCE "A" level standard. The Principal submits details of the course to the Regional Advisory Council through the LEA. The Regional Advisory Council (RAC) is a body voluntarily composed of the LEAs covering the geographical region and associated educational and industrial interests; it is a body of considerable influence and authority although its approval of a course is not necessarily final because some courses have to be further approved by the Secretary of State for Education through the Regional Staff Inspector (RSI).

27. However, for courses which come within their scope, the RAC/RSI approval mechanism is a check that:

- the regional industrial interest is served
- there is no unjustified duplication of provision, though this precaution is apparently imperfect. We heard of instances where the RAC ruling was disregarded.

28. For other courses, ie non-advanced work and all non-vocational courses, there is no formal system for checking duplication of provision. At least one RAC (Northern Counties) has, by joint request of its LEAs, embraced non-advanced courses, but it does not cover non-vocational courses. Both the Pilkington Report in 1966 and the Oakes Committee in 1978 commented on the need to improve co-ordination of non-advanced work.

29. For want of a standard system of checking regionally for duplication before approving a course, three varieties of local system have grown up:

- a "clearing-house" at LEA level, staffed by representatives from some of the authority's colleges
- a meeting of all Principals within an authority
- informal checks between Principals of neighbouring colleges.

30. The significant feature of these local systems appears to be that they do not look beyond the authority's geographical boundary. In this respect, the recommendations in paragraphs 66 and 67 of the Pilkington Report do not appear to have been widely adopted.

31. The conclusion therefore is that an adequate system exists for approving new courses except in the provision between neighbouring LEAs of:

- non-vocational courses
- non-advanced vocational courses where the RAC does not provide an approval system.

Overlap/Duplication

32. Nevertheless no instances of over-provision were reported among the 31 colleges visited. We heard the view expressed, more than once, that there is too much educational capacity in marine subjects. One CEO reported duplication between colleges in neighbouring authorities, but their governors countermanded agreements between officers to overcome it. Another respondent (not in a college) reported serious overprovision of "O" and "A" level teaching between schools and FE colleges. In contrast to this, one college had an agreement with a local school for students to join the school courses where the college could not provide facilities.

33. On the related subject of under-provision of courses, for example, when a course is stopped for paucity of students, we were told that the usual practice is for the course tutor to telephone neighbouring colleges to find places on a similar course to which the remnants might transfer.

Size of Classes

34. The size of classes was studied in 1964/1966 by the Committee on Technical College Resources under Sir Harry Pilkington. Their report on "The Size of Classes and Approval of Further Education Courses" was published in March 1966. They recommended in Appendix 1 of their report that the following should be the normal minimum requirement for initial enrolments before a course is approved:

(i)	full-time (including sandwich) courses	24
(ii)	part-time day courses involving a large amount of workshop practice	15
(iii)	other part-time day courses	20

35. For evening courses no minima were recommended. The decision whether to run a course was to depend on whether resources were already available because a day time course was being run, whether the evening course would make a disproportionate claim on those resources, and whether readily accessible alternative facilities were being duplicated.

36. The report allowed for exceptions to these minima when a good case could be made out.

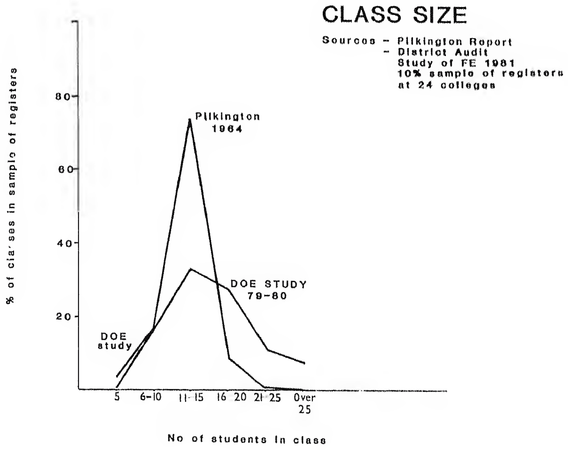
37. The Committee measured the size of all classes in a specific week in week beginning November 2nd 1964. The choice of week is such that most of the 'false' enrolments of the total who enrolled in September or October will have discovered their mistake and left. However, as the Pilkington Report states (paragraph 23), class sizes tend to fall during the currency of a course.

38. We have made a 10% sample (8% or 6⅔% at a few larger colleges) of 'true' enrolments and consistent attenders in classes in 79/80. The sample was made by examining registers - the only way short of counting people physically in the classroom which was obviously impracticable. So the sample is unreliable to the extent that the registers are wrong. In some 5% of instances, we were subjectively convinced, from the appearance of the register, that it was not an accurate record. However, the sample is large enough to be usefully informative in spite of the suspect 5%.

39. The sample gives an insight into class sizes in 1979-80, which can be compared with the Pilkington findings as follows:

Class Size	Pilkington Nov'64	District Audit Study of 79/80 Registers	District Audit Study analysed by Full-time	District Audit Study analysed by Part-time
	%	%	%	%
5 or less	0.4	3.7	3.3	4.0
6-10	16.7	16.6	17.2	16.9
11-15	74.0	33.5	34.0	34.3
16-20	8.6	27.4	30.0	25.3
21-25	0.2	11.3	10.0	11.8
Over 25	0.1	7.5	5.5	7.7
	100.0	100.0	100.0	100.0

40. The above table is shown graphically below. The graph suggests that there has been a shift since 1964 in the pattern of class size. Although the 'average' class size is still between 11 and 15 people, there now appear to be more classes with higher numbers than there were in 1964. So we may be witnessing the trend called for in the Pilkington Report at paragraph 39. However, some of this increase may also be due to the inclusion of adult educational classes, including non-vocational work, in the District Audit study. At one college, the town band constitutes a further education class of 50!



CLASS SIZE

Sources – Pilkington Report
– District Audit
Study of FE 1981
10% sample of registers
at 24 colleges

Attendance Rate

41. Classes lose members during their life span. There is an initial fall quickly after the first enrolments. These 'false' enrolments were eliminated in this study (as they also were in the Pilkington study) by counting only the enrolments of people who stayed the course for more than (say) six weeks. The 'true' enrolments thus derived were compared with the number of class members still attending consistently, albeit with occasional absences, at the end of the course. For this purpose the 'end' of the course was taken as the fortnight before the examination or, if no examination, the 6th to 4th week before the last session.

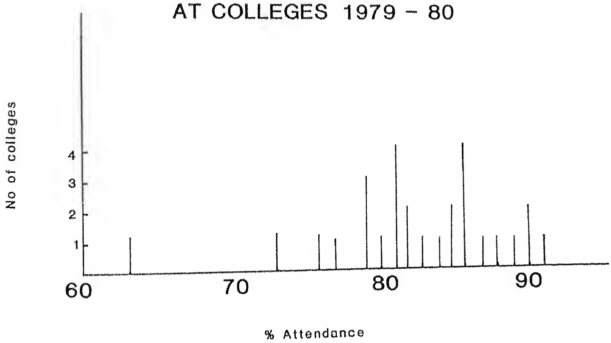
42. Our confidence in the information given in the registers at the end of courses was incomplete. There were a significant number of instances in which the tidiness and regularity of the 'ticks' in the register were such that we would have been naive to have accepted that all the attendances were true.

43. Notwithstanding the questionable validity of some of the attendance data and the subjective quality of the definition of 'true' enrolment and 'consistent' attender, the sample of 1262 registers - about 10% of the registers in 24 colleges - gives a set of attendance ratios which are reasonably consistent and which, in most cases, were confirmed by the college Principal concerned as being broadly in line with his own belief.

The ratios were:

Highest	91%	of 'true' enrolments stayed the course
Median	82%	
Lowest	63%	

The ratios are distributed as follows:


OVERALL ATTENDANCE RATE AT COLLEGES 1979 - 80

Review of Courses

44. With the passage of time the need for a course declines. We looked for the systems by which this point was predicted and action was taken to close the course or to combine two undersubscribed courses. A course allowed to run with too few members is a waste of teaching resources who might be better used in another way, especially if they are full-time staff.

45. The main mechanism for review is the Head of Department's watch over the enrolments at the opening of the academic year, to see whether a course is to run or not. In some colleges, the Principal plays an active part; in others he provides a second opinion. In a few instances, the academic board joins in the process.

46. For courses approved by the RAC, the latter will review enrolments, and thus the course size, every 2 years. Similarly, for the courses within his surveillance the district inspector of the Schools Inspectorate of DES watches the course sizes and class sizes in relation to a set of courses.

47. Some LEAs have standing instructions to Principals to report to them or to their Board of Governors when class sizes fall below the RAC's approval level or below a specified level in other cases.

48. Our conclusion is that the mechanism for reviewing the continuing need for existing courses rests entirely on enrolments and that it works systematically only for courses covered by RAC/Schools Inspectorate approval. For all non-advanced further education and all non-vocational studies, the review mechanism is generally within the college, normally within the purview of the Head of Department and the Principal but sometimes of the academic board and, in a few instances, of the governing body. In one instance, it was claimed that under the articles of government, the governing body could require the LEA to provide funds to keep a course going. One LEA, however, required colleges to justify the continuance of courses whose numbers have fallen below a prescribed minimum. But this LEA was dependent on the colleges reporting such instances.

Closing or Combining Courses

49. When a course is about to be closed, or will not open, because of small numbers, the Head of Department or course tutor usually tries to find a suitable alternative course in the locality to take over the residual students. For advanced further education courses there is little difficulty in doing this through the RAC, and also through the 'clearing house' arrangements which some LEAs operate at the beginning of the academic year.

50. For non-advanced courses, there is no formal information from which an alternative course can be found. The practice appears to be for course tutors or Heads of Departments to telephone other colleges in the locality. But this is something of a last resort. A college would much prefer other colleges to reach the closure level first so that it can keep its own course alive by taking on the castaways of the others.

51. A different approach applies to non-vocational courses where an 'economic' fee has been paid. Such courses are generally allowed to run even with 1 or 2 students unless there has been a refund of fees to earlier drop-outs. The argument is that students have paid the full fee and so should get what they paid for.

52. In general, we encountered no reluctance to close courses except where:

- full-time staff were involved who could not easily be redeployed
- the course had run over one year and the students' investment of time had been large and no accessible alternative course was available.

53. For non-vocational courses using part-time lecturers, most Principals implied that they had no hesitation in closing a course and using the part-time staff budget saved on more pressing purposes.

Curriculum

54. The curriculum for most courses is controlled by the 'examining body' eg City & Guilds, Business Education Council (BEC), Technician Education Council (TEC). There is an examining body for almost all vocational courses and for some non-vocational, even in the leisure and sport areas.

55. Some examining bodies require the college to propose a curriculum and programme which they then validate. And colleges design the curriculum and programme for all courses with no examining body.

56. When a college rather than an examining body designs the curriculum and programme, two consequences were reported to arise:

- there is a propensity to design a course which fits one, two or three terms of an academic year
- it is difficult for students to transfer from one college to another unless the course in each has progressed concurrently along a common programme.

57. The effects are twofold. First, a tendency to reinforce the existing academic year of three 12-week terms, separated by long breaks. The traditional academic year is of no relevance to anyone involved except the lecturers. It causes administrative difficulties and expense to employers and to district managers in Training Services Division. And it leads to underutilisation of buildings, instructional equipment and such support staff as laboratory technicians who generally work a 46+ week year.

58. The second effect works against the interests of students who need to change colleges either because they move home or change employer or because the course closes down for low numbers.

59. We did not investigate whether the educational benefits of each college developing its own curricula outweigh the disadvantages that this practice causes but one Principal doubted it. We heard vehement objections to the traditional academic year from many of those we interviewed who worked outside the colleges.

Marketing

60. In the context of this study, marketing means all those activities necessary to raise the awareness of the customer of further education to his needs in that area and to satisfy them at least cost to the public purse. We have already dealt, in paragraph 19, with the problem of identifying the need for courses. Here we deal with raising customer awareness of their own needs and with the colleges' ability to satisfy them.

61. It is arguable whether the public eduation service should set out to sell its services actively, but there appear to us to be two situations when it should:

- when full-time lecturers' timetables do not fully consume their agreed maximum contact hours per week less remissions
- when class sizes are either too small for educational efficiency or can be increased without reducing educational effectiveness and without additional cost.

62. The first situation is rare because lecturers are flexible people and can often turn to other subject areas. The second situation is widely found. 20% of classes have fewer than 10 students and the average class size is only 13.9 students. Except in practical subjects where teaching has to be in smaller groups, the targets set by Pilkington (Para 39 of his report) appear educationally practicable. So it is evident that there is spare capacity. Where there is also untapped demand, it seems both morally wrong and administratively a waste of resources not to get it used by stronger 'marketing'.

63. It is evident from our discussions with Principals that most colleges are aware of their obligation to market what they can offer. Almost all mentioned using brochures, leaflets and press advertising. In most colleges, the lecturers in the departments have regular contact with local employers and their training departments. Direct contacts appear to be mainly a self-generated effort, encouraged by Heads of Departments and supported by Principals. This was the only evidence we found of direct selling, other than formal 'cultivation' by some Heads of Departments and Principals of the local Training Services Division manager.

64. We found no evidence of active marketing by any LEA we interviewed. Most of those with whom we discussed the question indicated that they left it to the colleges. This is understandable because the college is geographically well placed to know the structure and needs of its local industry and community. But there seem to be two respects in which the LEA has a contribution to make:

- stating the policy for the direction in which spare capacity should or should not be pointed by a college. There are probably social and economic policies of which the college staff may be unaware or in disagreement.

- arbitrating between schools and colleges when each are intent on continuing the same classes, notably in "O" and "A" level subjects, with unacceptably small numbers in each. We heard of at least one case where schools would not allow a college inside to market its wares.

65. Our general impression about the marketing function in colleges was unfavourable. The selling tasks appear to be done by the right people but the effort seems sporadic, haphazard and unco-ordinated. Nobody appeared to be in doubt about the legitimacy of marketing or the need for it, but only in one college was there anyone charged with supervising it for the college as a whole.

Academic Establishment

66. Two factors determine the academic establishment of a college:

- the number of lecturers needed to teach the classes planned
- the amount of money which the LEA can persuade the local authority to provide to pay lecturers.

67. Currently, the second factor limits the size of lecturing staff in most colleges. Most authorities have 'frozen' the number of full time staff allowed. A budget for part-time lecturers is usually allowed to make sure full-time staff are fully loaded in slack periods and to provide reinforcement if justified by unexpected demand, for example, an unplanned TOPS or YOPS course.

68. In some cases, LEAs allow colleges to engage part-time staff beyond budget if the students on a proposed course pay an economic fee and the enrolment is strong for it.

69. The way of determining the first factor - the number of lecturers needed - is almost universally done by extending the use of the Burnham calculation. This is a calculation used as part of the arrangement for determining teachers' salaries under the terms of Section 2 of the Remuneration of Teachers Act 1965. It is given in Appendix 2a of "Scales of Salaries for Teachers in Establishments of Further Education - 1979", published by the DES.

70. The calculation determines the proportions of lecturers hours at the various grades to be provided according to:

- the total number of class contact hours required in the year
- the category of work

These can be converted to numbers of staff once the annual contact hours of each grade are established.

71. The calculation goes on to provide for determining the salaries of Heads of Departments and of Principals and Vice-Principals.

Student-Staff Ratio

72. The Burnham calculation is not the only approach to setting the academic establishment. Another way is to take a selected "student-staff ratio" (SSR), for which the DES has already developed national guide-lines. The two methods are discussed in the Further Education Staff College Paper IBN 1396, September 1979. This paper also summarises the weaknesses of the Burnham calculation if operated to maximise the grades and pay of academic staff including Principals and Vice-Principals.

73. The SSR approach was not used for establishment setting in any college or by any LEA we visited. It is however a ratio to which considerable attention is paid, especially if the ratio is worse than the national guide-lines. One college Principal said his LEA had tried to set establishments by SSR but it showed a net increase at all its colleges except one so the LEA had abandoned the attempt and kept its establishment freeze in force. That such formulae could give politically unacceptable results and that there was reserve about using them was also referred to by an Assistant Education Officer in another authority.

Teaching Hours

74. The working year of academic staff is limited by national agreement with NATFHE to 38 weeks of which two are non-teaching weeks. In the 36 teaching weeks, the hours actually in timetabled contact with students are limited to certain maxima according to grade. These maxima may be reduced by local agreement with NATFHE. We found in the colleges visited:

	Lecturer Grade & Contact Hrs/Wk			
	L1	**L2**	**Senior**	**Principal**
Most frequent	21	18	15	15
Next most frequent	20	19	16	13
Least frequent	22	20 & 17	17 & 18	14 & 16
Nationally agreed bands	20-22	17-20	15-18	13-16

75. Lecturers are required to be in their college or on approved duties away from it for the difference between their contact hours and 30 hours per week.

76. In some authorities Heads of Department are also expected to teach a small number of hours each week.

Remissions

77. There is a national agreement that recognises that a lecturer's work consists of more than teaching, invigilation, tutoring and supervision of students. Examples are: teacher training, union work, TEC/BEC programme development, statistics, parent/employer communication, exam administration, travelling between separated college sites. For such duties, reductions in class contact time can be agreed locally between the LEA and NATFHE. This can amount to around 3% of the full-time lecturer establishment. Remissions are usually delegated by the LEA to the college Principal who allocates them direct to the lecturers needing more time, in consultation with the Head of Department and the NATFHE representatives.

78. Practice on remissions varies from LEA to LEA and from college to college. Part of this variability derives from the number of TEC and BEC courses mounted. We encountered almost universal comment that the development and administration of these courses consumed unreasonable amounts of a lecturer's time - as much as 7% of contact time was quoted by one Principal. TEC/BEC apart, the amount of remission granted by either the LEA or the Principal appears to be decided mainly by how tough a line each is prepared to take.

Course Grading

79. The Burnham Further Education Committee has a course grading sub-committee which publishes a course grading guide covering all established courses in the FE sector. This is essential so that taught hours can be analysed by the category of the work taught. All principals said they adhered to this guide.

80. Where a course was not in the guide, perhaps because it was new, Principals varied in their answers as to how it was graded as follows:

- find a similar course and use its grading
- ask the Burnham grading sub-committee
- grade in Cat V unless known to be the advanced stage of a multi-year course, when it will be IV
- use our own wisdom and judgement
- ask LEA to decide.

Efficiency and Effectiveness

81. We in no way presented ourselves as, or claimed to be, educational experts. We have conducted the study to find ways in which the District Auditor could explore efficiency - the comparison between inputs and outputs. It is the educationist's business to assess effectiveness.

82. In our view, inputs are:

- physical facilities - specifically, we used 'teaching rooms'
- contact hours - specifically, the sum of lecturers times hours in contact

- attendance hours of all academic staff, academic support staff and administrative staff.

83. The outputs are:

- student hours - specifically the sum of the students times the hours being taught, interpreted broadly
- the examination qualifications achieved. Obviously these are not applicable to non-vocational further education.

84. In only two colleges were we shown a systematic practice for recording the relationship between inputs and outputs, and for comparing them with their own past performance. Answers to the general questions: "How do you know whether your college is efficient or not? What yardsticks do you use?" produced a variety of responses:

- I use: Full-time equivalent (FTE) students over FTE staff; and weighted average class size; and the comparison between enrolments, those who sit exams, and those who pass
- I look at: SSR, exam results, reports from training officers on quality of students
- Unfortunately, the index is exam results, but I also listen to the complaints of students, the feelings of the staff. And I pursue full timetables and full rooms
- I watch for a high level of student enrolment, full timetables, exam passes. The feedback from companies is quick if results fall off
- The shortage of money promotes efficiency in its use
- A FE college does not have the expertise to introduce schemes of cost effectiveness
- There is no stats system for courses not covered by the FE pool
- Minimum class size is an efficiency index, and I use the exam statistics (given in the report to the Governors)
- I watch the teachers' performance in the classroom and their qualifications, the efficiency of the administrative systems which I check personally, and I listen to the HMI
- I get a routine monthly report on all courses where attendance is below a particular number. Heads of Departments are expected to explain these. They will check with the lecturers' record books to ensure the course is being taught in a professional manner

- It is impossible. I ask myself if I am meeting demand. I do not feel the Governors or the LEA sit in judgement - possibly the latter makes a subjective judgement

- There are not many tools for control. I use the SSR and the pass rates of exams - all vocational courses' standards are checked against national averages. We do not follow-up with students

- We watch - at least once a year - average class size and SSR. Heads of Departments analyse exam results for their advisory committees; some courses have continuous assessment. If neither exams or assessments, the criterion is popularity, i.e. next year's enrolments

- We judge by whether the students keep on coming. I study every complaint - very few complaints

- We are about to use: external exam results, student success in getting jobs, applications per place, demand for self-supporting courses, local community involvement, assessment of HM Inspector

- We assess efficiency at Heads of Department meetings. We have student hours per department

- We (an LEA) have no mechanism to establish a college's efficiency

- I (a CEO) assess it through the District HMI and by a lot of informal contacts especially with students

- We (an LEA) do no follow-up on effectiveness or value for money.

85. It is evident from the responses that there is no single index of efficiency, and no standard set of indices, on which college principals are agreed as a measure. Furthermore, we understand that the DES has been unable to detect from the large volume of statistics it receives that there is any correlation between the student/staff ratio and educational performance. This is important because, for some people, the SSR is seen as the key link between the use of teaching resources and educational effectiveness.

Control Information

86. By the term 'control information', we mean the information, and the systems producing it, by which the inputs are monitored and their relation to outputs are watched.

87. We have explored 7 relationships, of which 4 are already being used by the DES. The seven are:

1 -	Student/Staff Ratio	(SSR)	The DES set - produced for a sample of about 100 F-E Colleges in a pilot scheme
2 -	Average Class Size	(ACS)	
3 -	Average Lecturer Hours	(ALH)	
4 -	Average Student Hours	(ASH)	

5 - Academic/Admin balance
6 - Facilities Utilisation
7 - Attendance Rate

88. The titles of the DES set are adequately self-explanatory. The method of deriving them is described in "Assessment of curriculum activity and utilisation of staff resources in polytechnics and further education colleges", published by Councils and Education Press, 10 Queen Anne Street, London.

89. The other 3 ratios have been introduced for this study. The Academic/Admin balance compares the attended hours of all academic staff with those of all staff excluding cleaning and catering. Too high a ratio suggests an under-supported, and too low an over-supported, academic staff. There is no 'right' balance, but the trend from year to year needs watching, particularly in relation to the movement in ALH and the trend in administrative staff numbers.

91. The Facilities Utilisation ratio seeks to reveal the use and availability of teaching spaces. In its present form it is unsatisfactory because the denominator is affected by the number of hours the college is open and operating. These vary from college to college so comparison is not possible and it may be more useful to adopt a national standard for the 'operating week'.

92. The Attendance Rate is an analysis of the 'consistent' attenders compared with 'true' enrolments. It seeks to assess the college's ability to:

- select students who can cope with the course

- maintain their interest and motivation to attend consistently.

93. Tabulations showing the ratios derived during the study are given in Appendices 3 and 4. They are intended as guidance and for tentative use as norms or standards when seeking to identify and assess variances in a college's operations. The need for reservation in their use arises because of the variability and quality of the basic information. For example, contact hours and student hours may have been derived from class registers or they may have been 'imputed' from lecturers' timetables and from student enrolments as they stood at a particular date (typically, November) in the year. But we are doubtful about the truth of some registers as a record - both of the attendance of students or, when the course is near its end, whether the class assembled at all and was taught!

94. Similarly, 'imputed' figures introduce uncertainty. There is no certainty that a timetable worked out in the summer will still be valid the following spring. Likewise it is unlikely that all the students attending in November will still be attending six-months later. For 'roll-on/roll-off' courses, there may even be more!

95. A further complication is the length of the course. Some are shorter than the 36 week academic year, some longer.

96. Obviously, 'imputed' figures are needed for planning and for decisions on whether extra courses can be fitted in. But as a means of control - of finding out what actually happened so that there can be improvement where needed - 'imputed' figures are not so useful as actual figures.

97. We therefore see no alternative but to develop the format of the register and the quality of the register keeping to a point at which it can be reliably used as a source of 'actual' figures for management control. We are aware, from the comments of some Principals about the willingness of some lecturers to treat registers seriously, that this process may take years.

PART 3 - WEAKNESSES

98. In this part, we summarise the weaknesses we detect in the systems for managing further education.

Accountability

99. There is no clear cut chain of accountability between the Principal of a college and the local authority and the local education authority on the one hand, and the governing body of the college on the other. One LEA reported instances in which the governing body, acting within their powers under their instrument of government, have instituted activities which are contrary to the policy of the LEA and which have incurred expenditure for which the Council had not given and did not wish to give approval.

The Need for Courses

100. The method of establishing the need for courses is, except for courses attracting a good volume of local industrial and residential demand, casual and haphazard. It depends on the energy and time available from individual lecturers. It should be possible to make the process more systematic so that communities where the academic staff are unmotivated or too busy are not at disadvantage.

Approval System, Overlap and Duplication

101. The system for approving advanced courses is effective, but there is no provision outside an LEA for approving non-advanced work. Consequently, there can be:

- duplication of courses at colleges across authority boundaries
- over provision (even within one LEA) of courses already supplied by school, e.g. 'O' and 'A' level courses
- classes too small for easy learning, with the consequent risk of folding mid-term.

We feel this is an area needing further attention.

Curriculum Development

102. Three areas of curriculum development are suspect:

- the propensity to make the curriculum fit the academic year or term(s), by rounding up.
- the individual development of TEC and BEC courses at each college suggests a great many lecturers are re-inventing the wheel

- curriculum development by individual colleges for courses in wide demand makes it more difficult for a student to change college in mid-course.

103. These are educational issues outside the scope of the audit function but they clearly affect the lecturer-cost aspect of 'value for money'.

Marketing

104. Four aspects of marketing seem to us to be important:

- identifying the need for courses
- 'selling' places on courses
- resources for marketing
- overall direction.

We gained the impression that the first aspect is often dealt with by developing a course and giving it a test run to see if it is wanted. This is defensible only when desk research has been thoroughly done and demonstrates a clear need. We gained the impression the desk research was superficial and did not always use some of the sources readily available, for example: Manpower Services Commission information, Job Centres, county planners, and similar authorities in touch with employers and the job market. A summary of the approach taken by the Training Services Division of the Manpower Services Commission is given in Appendix 6. We feel it is not enough to rely for market information on lecturers' personal networks of local industrial contacts and college consultative committees.

105. The second aspect refers to courses already running but with low numbers. We feel that if a course is justified on the basis of satisfying a legitimate need, and there is evidence that more students would enrol if they knew of the course, it should not be left to the course tutor alone to sell it.

106. Here we see a difficulty. Most colleges do not appear to have the human or systems resources for serious selling. But more could perhaps be done to sell:

- directly by allocating sales contacting and promotional responsibilities to Heads of Departments and to principal and senior lecturers whose contact hours are less than others and so have more discretionary time in their week
- indirectly by mailshots and advertising material for the production and distribution of which it may be justified to increase the administrative tasks at the college and LEA level.

107. Clearly, if there are full-time staff in any department whose contact hours are not fully committed, they should be the first to be considered for alleviating the weakness in marketing, either by working on it directly or by freeing others who are good at it.

108. Lastly, the responsibility for overall supervision of the marketing activity needs to be clearly allocated.

Academic Establishment

109. The use of the Burnham calculation for determining the mix of lecturer grades, the department grade, the college group, and as a step in setting the academic establishment, is a weakness which encourages the maximisation of student hours per course and higher categories of work. The result is that full-time courses are encouraged because unlike other courses, the Burnham rules permit student hours to be calculated on the assumption that all students achieve 100% attendance for 30 hours a week for all 36 weeks of the academic year. The facts that this attendance rate is never achieved, that there may be extended periods of private study each week and that courses may actually come to an end some weeks before the end of the third term are not taken into account. This contrasts with other types of courses when only actual supervised student hours can be counted. Work at category II/III is encouraged because the student hours per Burnham unit are more favourable at these levels than at IV and V.

110. While there is a freeze on academic establishments the weakness is not reflected in overall numbers. But it still leads to inflated grades and thus to relatively shorter contact hours, neither of which assist in the pursuit of 'value for money'.

Teaching Hours

111. There are 2 weaknesses in the agreements on standard maxima for contact hours per week:

- no account is taken of the different lengths of time needed for preparation of instructional material and for correcting students' work between the different subject areas and different teaching methods

- senior grades, who by their skill and experience should need less time for preparation and correction, teach for one-eighth less than an L2 and one quarter less than an L1

- lecturing to advanced work courses brings virtually automatic promotion to Senior Lecturer for a Lecturer Grade 2. This limits his teaching hours and this limit remains when he reverts to non-advanced work. So he is lost as an L2.

(Paragraphs 112-114 not issued)

Remissions

115. The remission system reduces class contact time per lecturer. Class contact time has to be limited for two main reasons:

- class contact is too demanding to be maintained continuously through a whole working week
- every lecturer has some preparation and some administration to do, and most have work to correct as well.

116. The tasks for which remission is allowed are generally more akin to preparation, admin and correction than to class contact. Therefore, if extra time is needed for remission tasks, it seems more sensible to extend the attendance hours in the week than to reduce the contact time and have to engage more lecturers to make good the loss.

117. Bearing in mind that the lecturers' week of 30 hours is generally 5 to 7 hours per week shorter than that of his colleagues in local and central government services, there would appear to be scope for dealing with remissions in other ways than reducing contact hours.

Course Grading

118. The grading of a course determines the category of work and thus affects the grades and salaries of the academic staff. Therefore, when a course is graded by a college because it is not in the Burnham course grading book, there is opportunity for abuse. The study team learned of no such abuse but one Chief Education Officer is sensitive to this and is proposing to have such gradings assigned in consultation with the LEA.

Efficiency and Effectiveness

119. The lack of any quantitative indices of efficiency is a weakness serious enough to merit further attention because of the very large resources consumed - 70,000 lecturers in FE paid £528m in 1979/80 gives an idea of the scale. Even if quantitative indices were used only by auditors, it would make possible a regular, if infrequent, check on trends.

120. Financial controls go a long way but they are restrainers, rather than pointers to long term action, and LEAs and college management would be in a better position if quantitative operating controls also were available.

121. One method would be to extent the DES control ratio approach into:

- all colleges, and their major departments
- all work, not just categories I and II/III

- other inputs and outputs such as teaching areas, admin resources, and qualifications awarded.

122. Any management control system has its defects. The profit and loss account and balance sheet have many weaknesses and can readily be window-dressed. But industry and commerce could not run successfully without them and without the discipline and order which are imposed by the processes underlying them.

123. The boundary between efficiency and effectiveness in a college will always be difficult to define. Both aspects are important to any examination of a college's operating performance. It follows that auditors undertaking a value for money appraisal of a college's activities are likely to need advice from the education side, eg from HM Inspectorate of Schools.

Control Information

124. Control information is useless unless:

- there is sufficient planning information for setting budgets and references

- information on 'actual' performance is accurate and prompt.

125. Planning information is generally plentiful. It has to be - for timetables, prospectuses, the Burnham calculation and for budgetting. The only weakness is that the method of compiling it varies from LEA to LEA, so national comparison is difficult.

126. The main weakness in information for controlling the key areas of contact hours and student hours is in the registers - their format, their variability between LEAs and colleges, and the unreliability of the data recorded. These matters must first be put right if management is to monitor these important inputs and outputs.

(C M McArdle)

(D R E Calf)

(J Sprigg)

APPENDIX 2

EXAMPLE OF QUESTIONNAIRE

Notes

1. This document is an interviewer's aid, developed at the outset of the study. It is not filled in by respondents.

2. Formal worksheets were used for assembling and organising the underlying data for deriving the ratios on p.6. Examples are not enclosed.

(Cover)
21.1.81
Issue 3

FURTHER EDUCATION STUDY

QUESTIONNAIRE

College (or LEA): ______________________________

Address:

Tel No:
Date:
Interviewer:

Respondents:

No of Students:

No of Academic Staff:

Organisation:

Teaching Rooms: No of special:

No of general:

Hours per week college is operating:

Operating weeks per year:

Q1 Origin and perpetuation of courses

(a) How is the need for the course determined?
Possible sources are: tradition/local residential demand/local industrial demand/Regional Advisory Council/MSC/National Bodies.

(b) Who approves running the course?

(c) Who reviews the need and when?

(d) How is demand sensed:

- market study?
- post-course follow-up?
- pressure?
- views of contacts?

(e) Who is the MSC contact?

(f) What determines course size?

(g) Describe procedure to minimise overlap with neighbouring colleges.
Is it:

- formal/informal?
- by the College, by LEA, by RAC?
- how frequent?
- up to what distance?
- for every course?
- for undersubscribed courses?

Size and duration of courses

(a) Who decides the curriculum, curriculum sequence and course duration for each course?
What external guidance, e.g. examining body, is used?

(b) Who decides when/whether to close an undersubscribed course or combine similar courses, and on what criteria?
How frequent is the review?
Does it require higher approval?

(c) Are courses 'marketed' to boost course size?
If so, by whom? And how? (adverts, literature, visits etc)
If by academic staff, for what % of their time?

Q3 Academic Staffing

(a) Which method is used to set the academic establishment?

- Burnham proportions and volume and category or group of work
- Student/Teaching Staff Ratios?
- LEA political decision
- Another

(b) Any local rules for applying Burnham?

(c) Is Burnham Grading of Courses observed?

(d) How do you grade a course not in the Burnham Grading?

(e) Are teaching staff contact hours set by local agreement?
If so, limited to what?

CONTROL

(a) Assessment of College's efficiency

- By what criteria?
- By whom?
- How often?

(b) What control info is recorded and summarised? and by whom?

Following are minima:

1. FTE all employees in no.
2. " academics "
3. Student : teaching staff ratio
4. Class size
5. Teaching staff contact hours
6. Student curricular hours
7. Results - exams passed
    - standards achieved
    - attendance ~~drop-out~~ rate

Analysis by work category/group desirable where possible. Is this done?

What other similar data recorded?

OPERATING RATIOS

Q5

(a) For last academic year (or last complete term if last year not practicable) what are the following key indices for this College?

1 Academic/Admin balance:-

$$\frac{\text{Total attended hours (per week) of academic staff (FT \& PT)}}{\text{Total attended hours (per week) including overtime of all monthly staff (FT \& PT) excluding catering and cleaning}}$$

2 Student/Teaching Staff Ratio:- (SSR)

$$\frac{\text{Av'ge Class Size x Av'ge lecturer teaching hours}}{\text{Av'ge student taught hours}} = \frac{\text{ACS x ALH}}{\text{ASH}}$$

3 Average Class Size (ACS):-

$$\frac{\text{Total students' curricular hours}}{\text{Total teaching staff hours}}$$

4 Teaching Staff utilization/Av'ge lecturer hours (ALH):-

$$\frac{\text{Total teaching (contact) hours}}{\text{No of F.T.E. teaching staff}}$$

5 Average student taught hours (ASH):-

$$\frac{\text{Curricular hours of all full-time students}}{\text{No of full-time students}}$$

6 Facilities utilization:-

$$\frac{\text{Total students' curricular hours \_\_\_\_\_\_ per week} \div \text{ACS}}{\text{No of teaching rooms x hours available per week}}$$

7 Attendance Rate

DEFINITIONS

FTE Student (Full-time equivalent) = All full-time students

plus sandwich course students

$$\text{plus } \frac{\text{curricular hours of part-time and evening students}}{\text{average curricular hours of a full-time student in dept or subject group for same period}}$$

$$\text{plus } \frac{\text{curricular hours of short course students}}{\text{average curricular hours of a full-time student in dept or subject group for same period}}$$

FTE Teaching Staff = Full-time staff who teach

$$\text{plus } \frac{\text{weekly part-time contact hours}}{18} \quad \text{for advanced work}$$

OR

$$\text{plus } \frac{\text{weekly part-time contact hours}}{21} \quad \text{for non-advanced work}$$

Work category

I = work for higher degrees
II & III = " " first degrees
} Advanced level

IV = work above O level
V = the rest
} Non-advanced level

Work Group

1 = Where teaching is based on labs or workshops
2 = where teaching is based on classrooms

Curriculum a statement in detail of the specific knowledge and skills to be imparted and to what standard for achieving a 'pass'.

Contact hour/time	Time when a lecturer is teaching or attending students currently at their work (i.e. when the lecturer is at the behest of the students and cannot regulate the use of his/her own time).
Effectiveness	The extent to which a College achieves its teaching or instructional objectives, e.g. exam passes, passing standards achieved. (Efficiency is the relationship between resources used and the effectiveness achieved).
Attendance rate	The proportion of students still attending to those originally enrolled.
Teaching Room	A space allocated for instructional use, including instructional workshops, laboratories, syndicate rooms, as well as orthodox classrooms.
Curricular Hours	The hours of contact time provided for in course syllabus.
Student Curricular Hours	Number of students times the curricular hours of each.

APPENDIX 3

LEA STATISTICS AND RATIOS

Local Education Authority	A	B	C	D	E	F	G	H	I	J	K	L	M
Student Hours (000s)	3,613	2,886	4,561	7,133	5,627	3,117	4,072	1,332	5,090			6,137	7,976
Lecturer Hours (Class Contact) (000s)	233	231	303	587	380	265	361	129	375			496	570
FTE Students	3,863	2,672	5,338	7,292.9	5,276	3,325.4	4,429	1,313	4,889			5,581	8,325
FTE Lecturers	352	371	454.1	838.8	668	393.9	517.3	192.7	611			755	922.4
Academic Balance	.65	.73	.70	.72	.69	.77	.75	.77	.76			.77	.69
Student-Staff Ratio - SSR	11.0	9.9	11.8	8.7	7.9	8.4	8.6	6.8	8.0			7.4	9.0
Average Class Size - ACS	15.5	12.5	15.1	12.2	14.5	11.7	11.3	10.4	13.6			12.4	14.0
Average Lecturer Hours - ALH	661	623	667	700	569	674	698	667	614			656	618
Average Student Hours - ASH	935	1080	854	978	1048	937	919	1015	1041			1100	958
Attendance Rate	.86	.88	.81	NA	.80	.86	.85	.86	.81			.81	.80
Salary Costs:													
Per Lecturer Hour (£)	11.62	16.06	12.94	8.59	10.72	12.98	10.87	NA	11.21			11.11	12.16
Per Student Hour (£)	0.75	1.29	0.86	0.74	0.79	1.11	0.96	NA	0.83			0.83	0.87
Facilities Utilisation	.46	.45	.57	NA	.52	.56	.50	.48	.39			.62	.54

Note:

These aggregated data and ratios should be treated with reservation and used only as very broad indicators.

APPENDIX 4

COLLEGE STATISTICS AND RATIOS

Colleges	01	02	03	04	05	06	07	08	09	10
Student Hours (000s)	1,947	2,678	1,518	1,332	2,124	821	1,601	2,715	886	1,599
Lecturer Hours (Class Contact) (000s)	150	178	97	129	176	62	113	185	62	129
FTE Students	1,920	2,686	1,621	1,313	1,967	760	1,724	2,569	812	1768.9
FTE Lecturers	227	268.4	150	192.7	291	103	196.8	330	92	188.2
Academic Balance	.76	.65	.84	.77	.71	.85	.65	.76	.74	.76
Student-Staff Ratio - SSR	8.5	10.0	10.9	6.8	6.7	7.8	8.8	7.8	8.7	9.4
Average Class Size - ACS	12.9	15.1	15.8	10.4	12.1	13.4	14.1	14.7	14.3	12.4
Average Lecturer Hours - ALH	665	662	647	667	605	632	577	561	666	662
Average Student Hours - ASH	1,014	997	934	1,015	1,080	1,080	929	1,057	1,091	904
Attendance Rate	.90	.81	.79	.48	.87	.80	.73	.63	.89	.85
Salary Costs:										
Per Lecturer Hour (£)	NA	14.53	10.93	NA	12.50	12.57	12.98	NA	11.56	13.51
Per Student Hour (£)	NA	0.96	0.70	NA	1.04	0.94	0.92	NA	0.81	1.09
Facilities Utilisation	.40	.55	.56	.86	.41	.75	.51	.40	.59	.59

Colleges	11	12	13	14	15	16	17	18	19	20	21
Student Hours (000s)	821	1,448	762	1,287	1,520	1,883	1,271	428	1,942	2,334	330
Lecturer Hours (Class Contact) (000s)	82	144	55	81	120	125	93	40	122	194	184
FTE Students	810	1,218	880	1,185	1,642	2,652	1,191	400	2,253	2,105	386
FTE Lecturers	129	216	90.2	120	173.7	186	143	54	187	304.9	30
Academic Balance	.78	.74	.70	.81	.71	.79	.69	.81	.58	.72	.73
Student-Staff Ratio - SSR	6.2	5.6	10.0	9.9	9.5	14.3	8.3	7.5	12.1	6.9	13.0
Average Class Size - ACS	9.9	10.1	14.3	15.9	12.6	15.0	13.7	10.7	15.9	12.1	18.2
Average Lecturer Hours - ALH	631	656	609	675	693	674	649	748	654	635	613
Average Student Hours - ASH	1,013	1,169	866	1,086	926	710	1,067	1,070	862	1,109	855
Attendance Rate	.79	.84	.86	.76	NA	.82	.81	.85	.88	.85	.90
Salary Costs:											
Per Lecturer Hour (£)	10.63	9.20	13.09	10.04	9.77	10.69	11.31	NA	11.58	9.1	10.98
Per Student Hour (£)	1.07	0.92	0.94	0.63	0.77	0.71	0.83	NA	0.73	0.75	0.61
Facilities Utilisation	.66	.78	.48	.89	NA	.60	NA	.34	.47	.53	.42

APPENDIX 4
(Continued)

APPENDIX 4
(Continued)

Colleges	22	23	24	25	26	27	28	29	30	31	32
Student Hours (000s)	3,700	976	480		1,870	1,352	3,593	1,249		556	875
Lecturer Hours (Class Contact) (000s)	246	66	72		146	92	289	93		41	64
FTE Students	3,554	1,102	729		1,567	1,224	3,700	1,431		531	796
FTE Lecturers	464	110	110		234	135	407.3	141.6		61	95
Academic Balance	.68	.68	.74		.58	.76	.75	.76		.77	.71
Student-Staff Ratio - SSR	7.7	9.9	6.6		6.7	9.2	9.1	10.3		8.7	8.4
Average Class Size - ACS	15.0	14.6	6.7		12.8	14.8	12.4	13.6		13.6	13.6
Average Lecturer Hours - ALH	531	597	654		626	683	710	658		673	679
Average Student Hours - ASH	1,041	885	658		1,193	1,096	971	873		1,048	1,099
Attendance Rate	NA	.82	.81		.86	.81	.86	.79		.77	.83
Salary Costs:											
Per Lecturer Hour (£)	NA	11.44	11.3		13.27	10.72	10.75	10.66		9.39	11.25
Per Student Hour (£)	NA	0.77	1.70		1.04	0.74	0.87	0.79		0.69	0.83
Facilities Utilisation	NA	.58	.51		.38	.46	.50	.78		.52	.75

Colleges	33	34	35	36	37	38	39	40	41	42
Student Hours (000s)	761			1,562	1,123	1,518	2,109	250		344
Lecturer Hours (Class Contact) (000s)	55			127	93	137	126	24		29
FTE Students	705			1577.9	1357.9	1556.5	1,129	292.8		317.3
FTE Lecturers	80			163.8	123.4	205.7	205.6	31.5		44.5
Academic Balance	.79			.77	.80	.78	.83	.68		.63
Student-Staff Ratio - SSR	8.9			9.6	11.0	7.6	8.4	9.3		7.1
Average Class Size - ACS	13.8			12.3	12.1	11.1	16.7	10.2		11.9
Average Lecturer Hours - ALH	689			774	753	666	615	772		651
Average Student Hours - ASH	1,080			990	827	976	1,230	853		1,083
Attendance Rate	.91			NA	NA	.87	.87	NA		NA
Salary Costs:										
Per Lecturer Hour (£)	NA			8.51	8.68	12.48	NA	7.87		9.31
Per Student Hour (£)	NA			0.69	0.72	1.13	NA	0.77		0.78
Facilities Utilisation	.58			NA	NA	.54	.55	NA		NA

Note:

The ratios above should be treated with some reservation because

a) of their variability

b) some of them were derived from data which was of doubtful accuracy

c) the data for different groups and categories of courses were aggregated for the college rates

For example average lecturer hours of less than 600 may well be worth enquiry but too much significant ought not to be placed upon the difference between say 632 and 662.

APPENDIX 5

BURNHAM COURSE CATEGORIES

Category	**Type of Work**
I	Courses or research programmes where a first degree would normally be a pre-requisite for attendance and which lead to a higher degree or a qualification of equivalent status.
II/III	Courses above Ordinary National Certificate standard leading to first degrees or equivalent qualifications, and courses which involve study where an entry standard of one or more 'A' levels is normally required.
IV	Courses above 'O' level or comparable level leading directly to the Ordinary National Certificate or sources of comparable standard.
V	Courses other than those described above.

Courses in categories I and II/III are known as advanced courses. Courses in catagories IV and V are known as non-advanced courses.

APPENDIX 6

DEMAND SENSING BY TRAINING SERVICES DIVISION

Though TSD's sources of information are by no means without serious deficiencies they do provide considerable information on training needs and would be of use to further education in local government.

The prime need is for identifying occupational skills which are in short supply or will be in short supply in the future both nationally and locally. Secondarily it is useful to know the state of play in industries.

TSD seek to achieve the need by national statistical analyses supplemented by local and regional knowledge.

Information is gathered for planning purposes on the labour market structure by annual surveys (such as Labour Force Survey, L7A enquiry (specific industries) and information provided by ITBs). At the moment local information on vacancies notified to Job Centres is available by occupation together with an occupational analysis of the unemployed. The Government have decided to deprive themselves of the latter by dropping the compulsion for the unemployed to register for work at a Job Centre.

Information is collected locally and fed to the TSD on placings achieved following training courses. District managers are required to maintain contact with local employers.

All trainees are asked to report as to whether they are using the skills in which they were trained six months after the completion of training.

TSD monitors drop-out rates and is concerned at their high level in skill centres. (The position is better in CFEs).

The cost per trainee on each course and the cost of successful placings are also monitored and employers are asked for qualitative opinions on the performance of the trainee.

Warwick University produces projections of needs annually - nationally by occupation and regionally by industry. It is not clear how they achieve this but TSD appear to set great store by the projections.

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